

Fig. 1

Activation of naive T cells - two independent signals are required

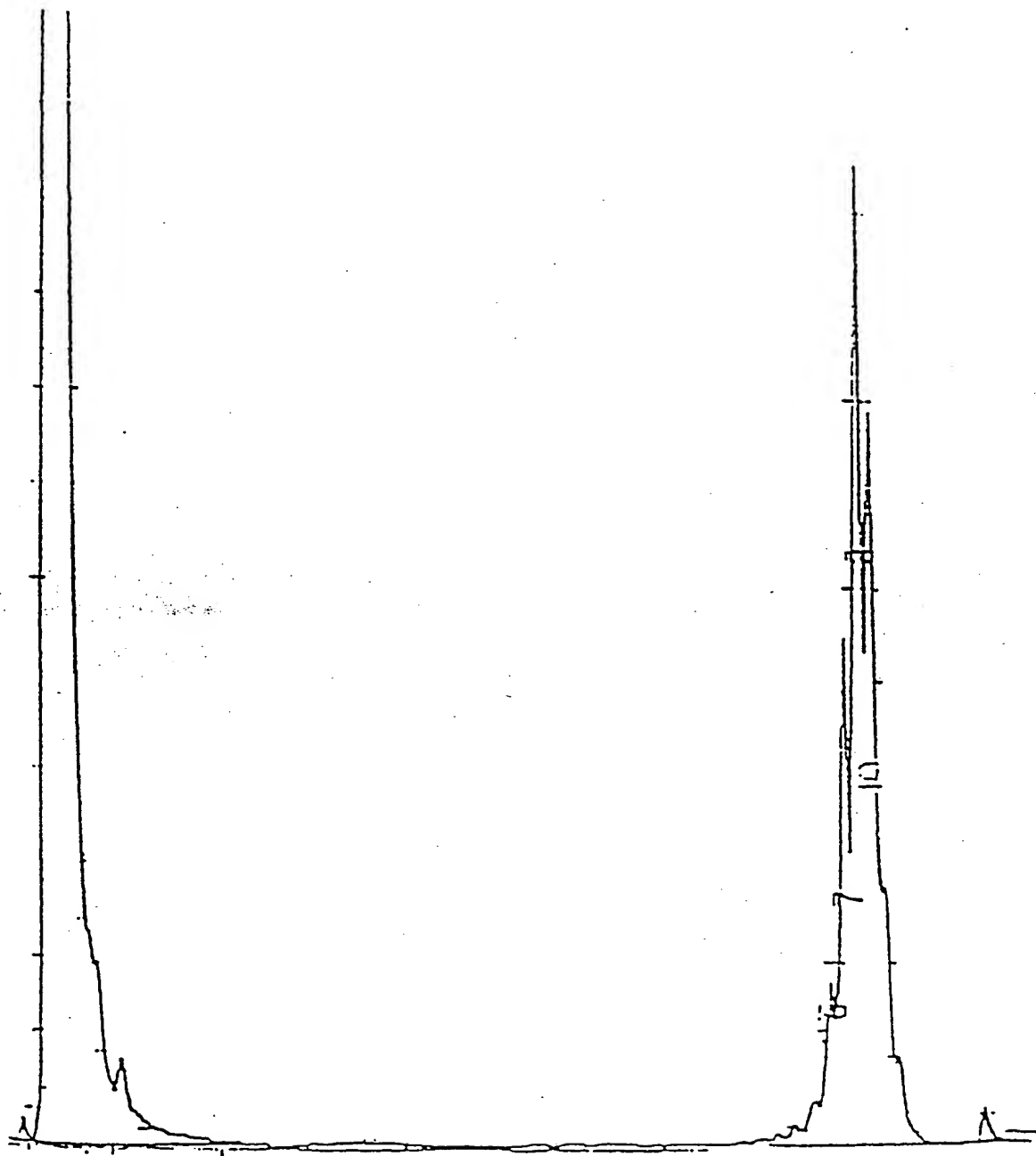


Fig. 2a

HPLC profile of countercurrent-purified mycolic acids originating from *M. tuberculosis*, using the modified method

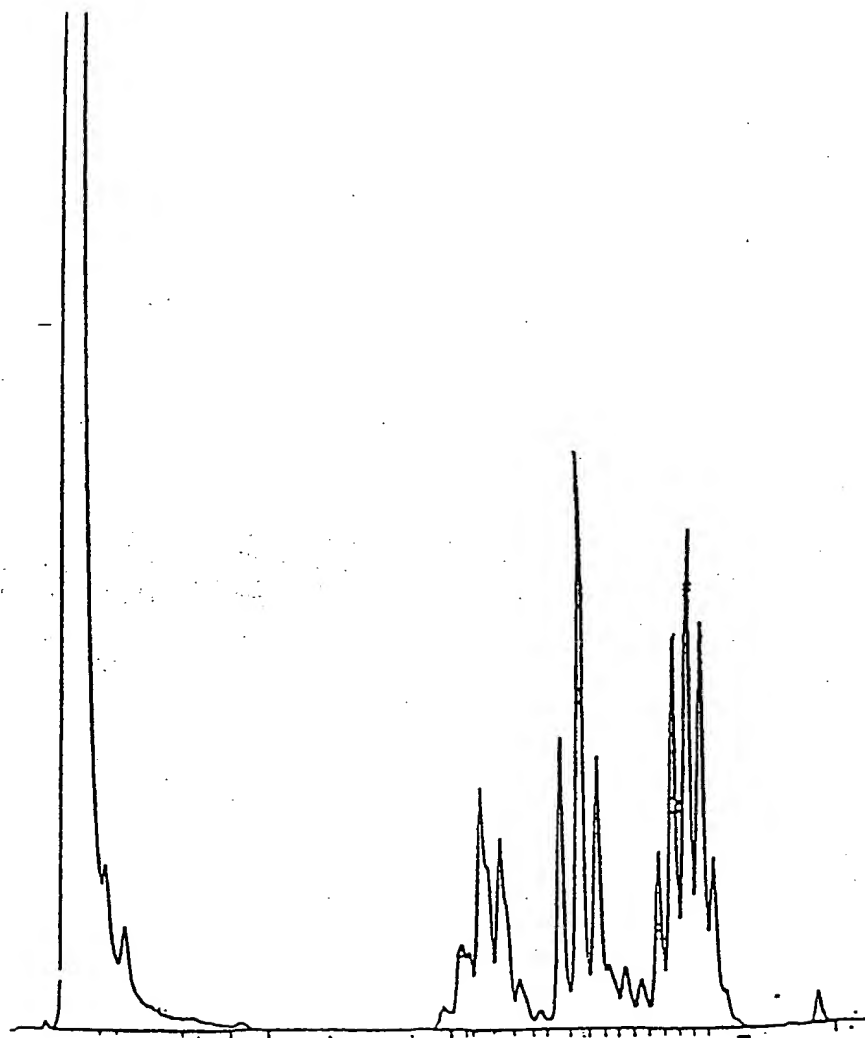


Fig. 2b

HPLC profile of countercurrent-purified mycolic acids originating from *M. vaccae*, using the modified method

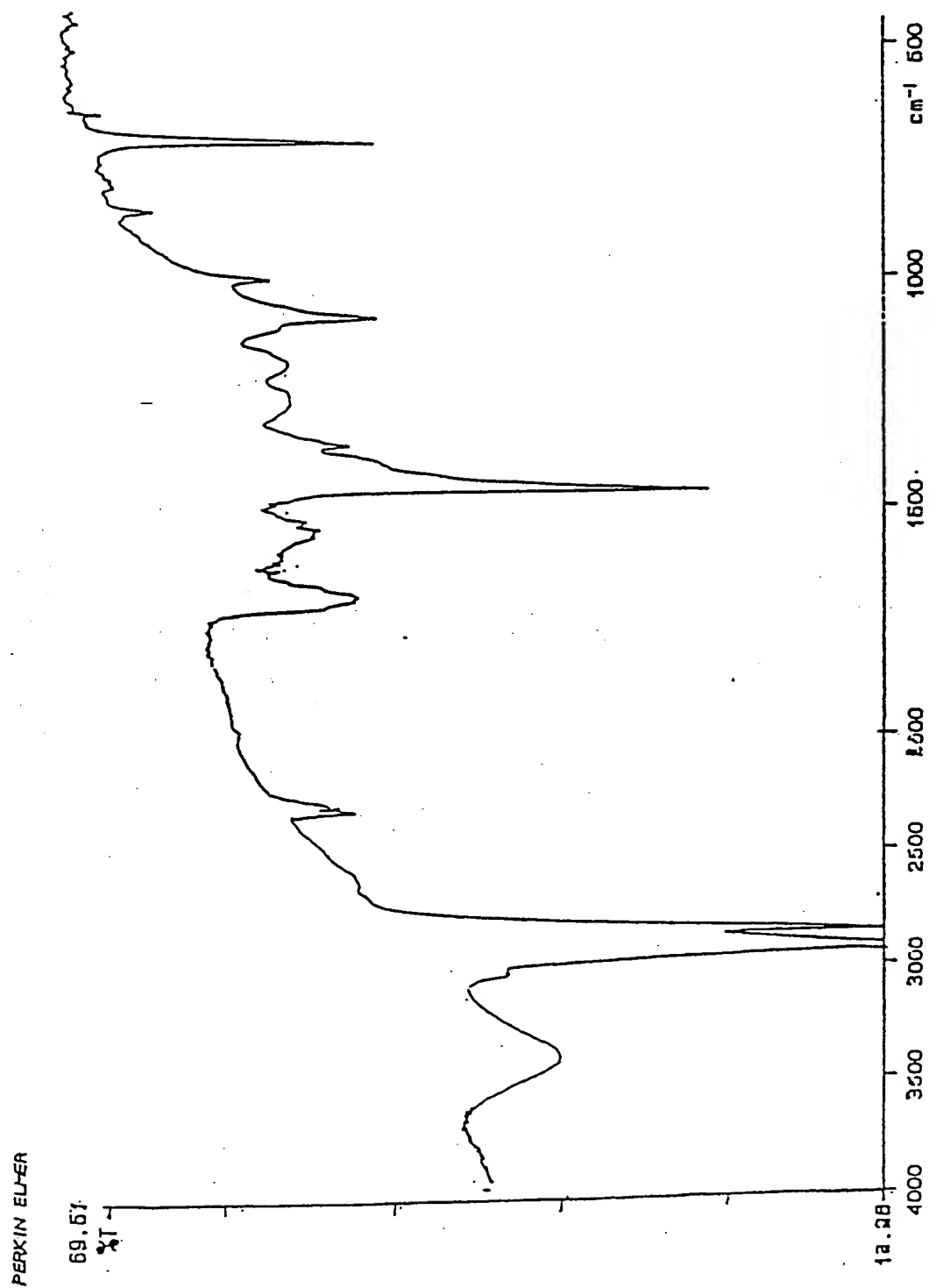


Fig. 3 Infra-red spectrum of countercurrent-purified mycolic acids, originating from *M. tuberculosis*

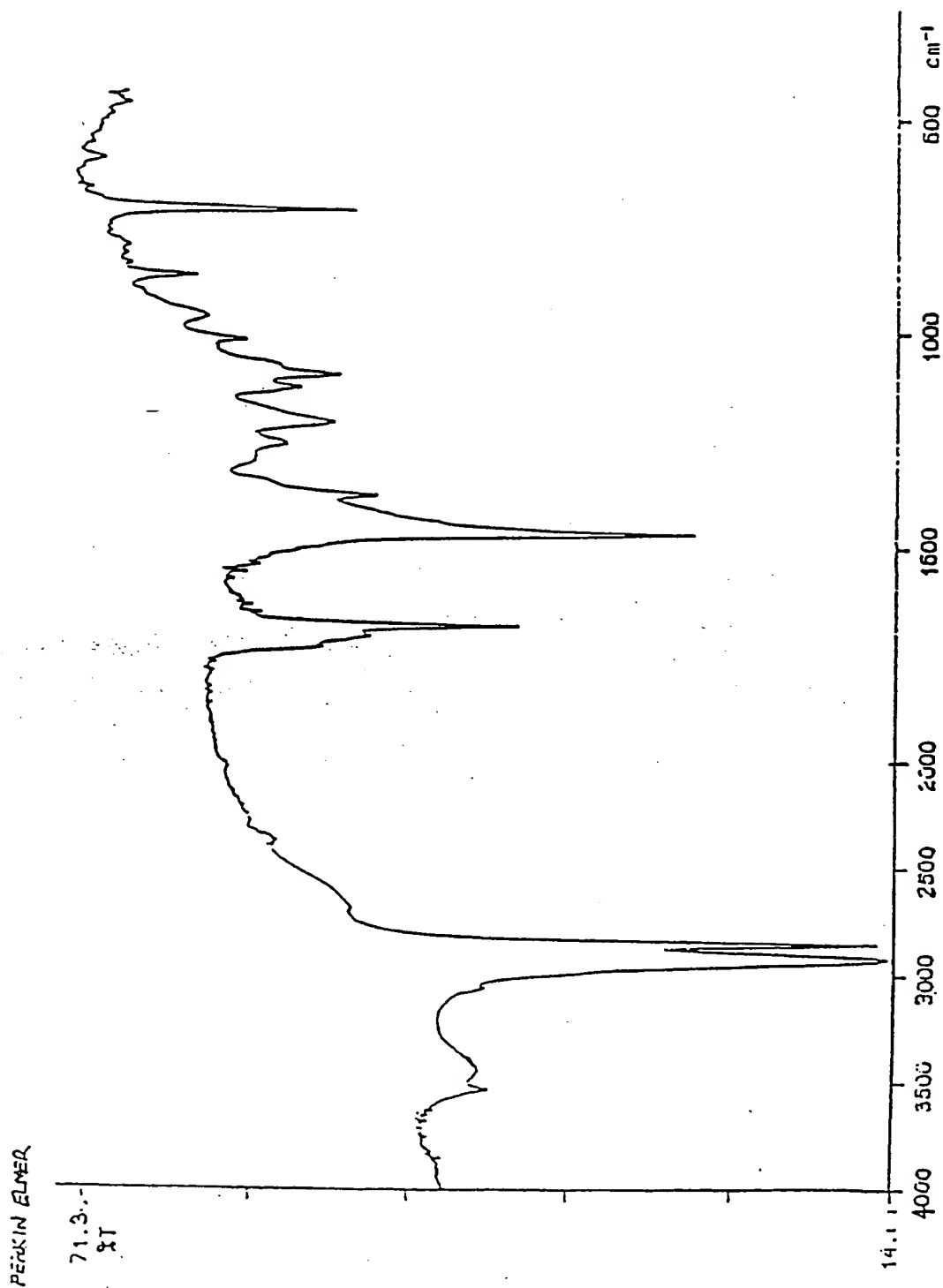


Fig. 4 Infra-red spectrum of the resaponified of the countercurrent-purified mycolic acids, originating from *M. tuberculosis*

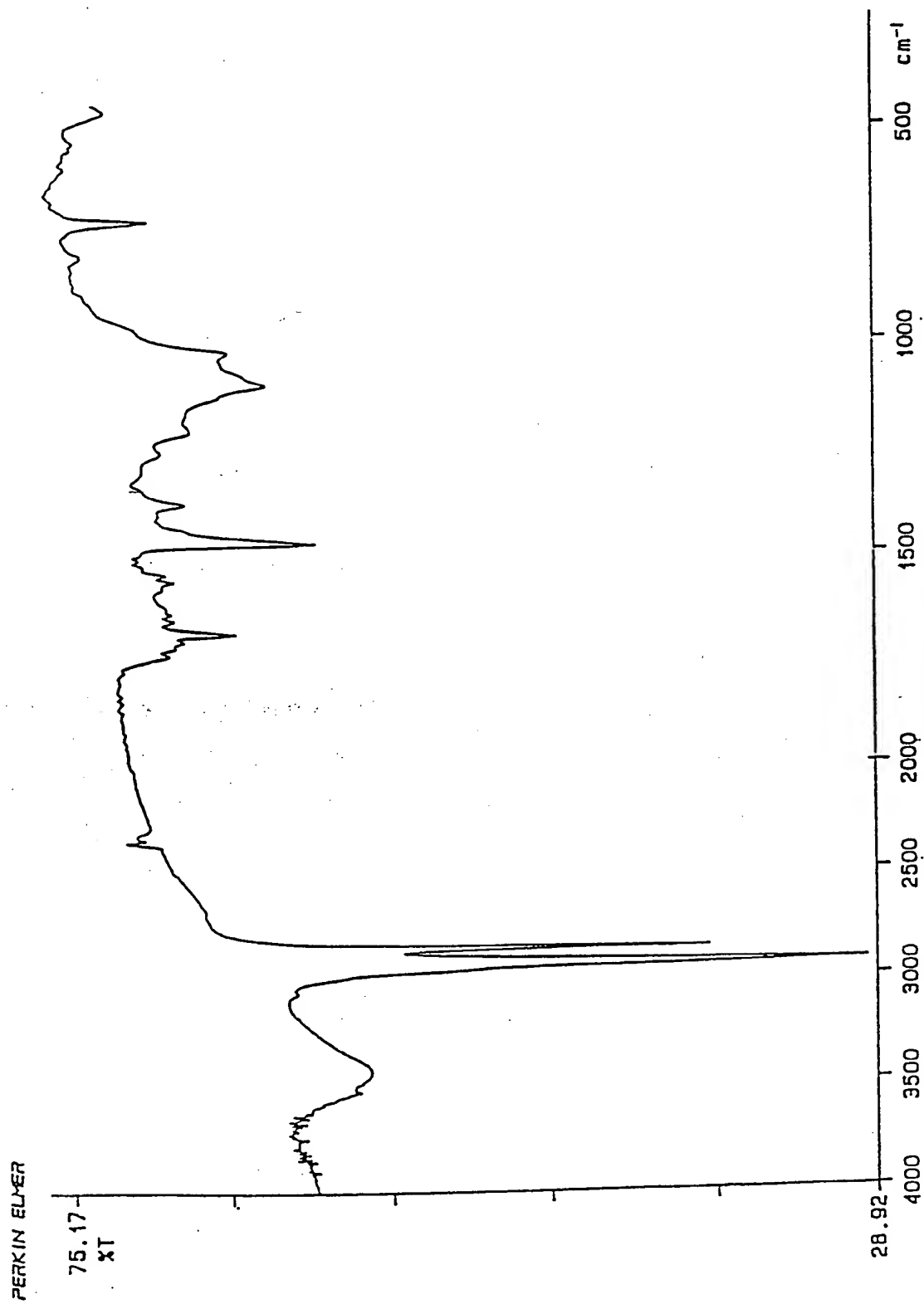


Fig. 5 Infra-red spectrum of countercurrent-purified and resaponified mycolic acids, originating from *M. tuberculosis*, frozen at  $-70^{\circ}\text{C}$

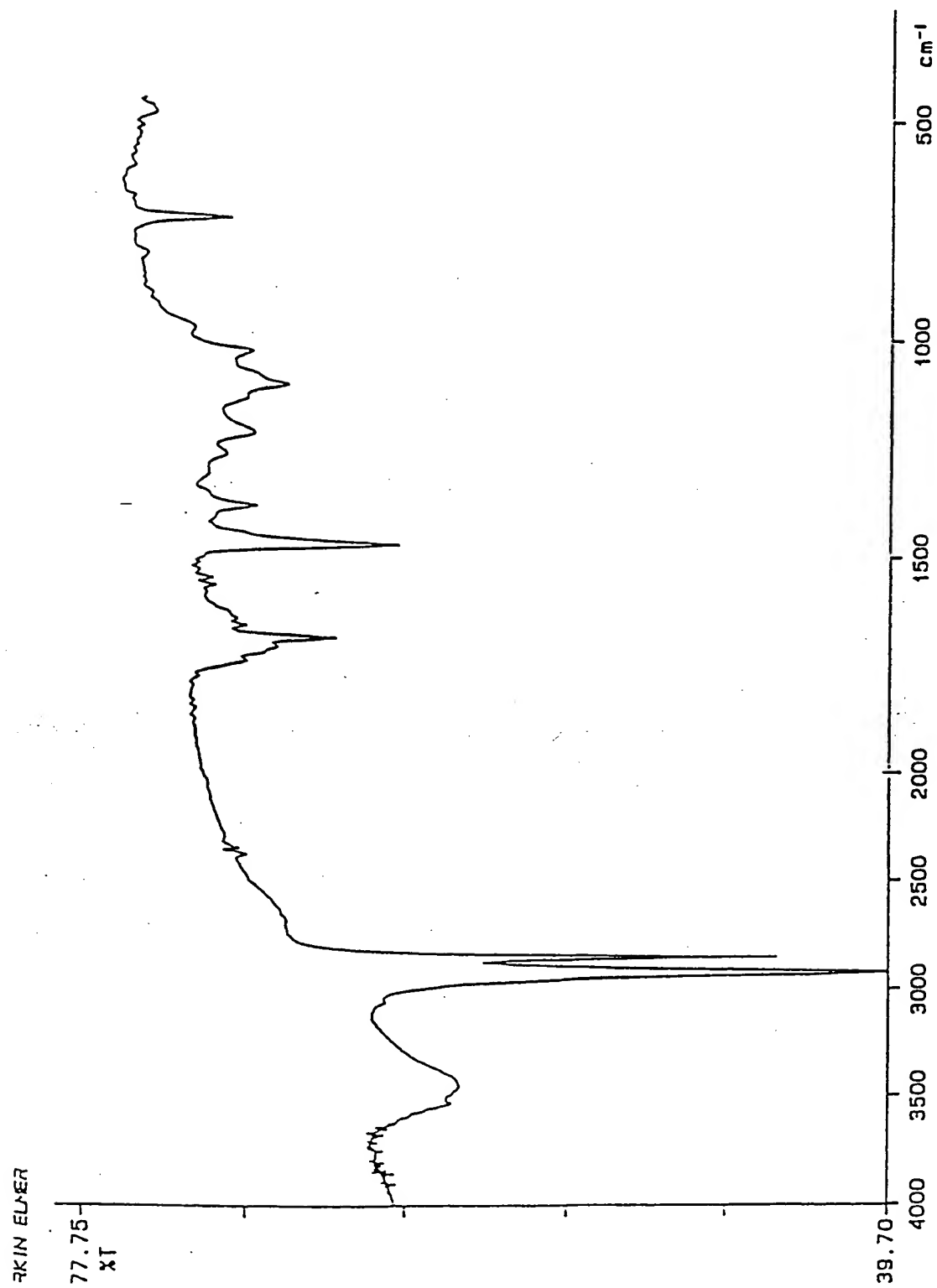


Fig. 6 Infra-red spectrum of countercurrent-purified and resaponified mycolic acids, originating from *M. tuberculosis*, and maintained at 10°C

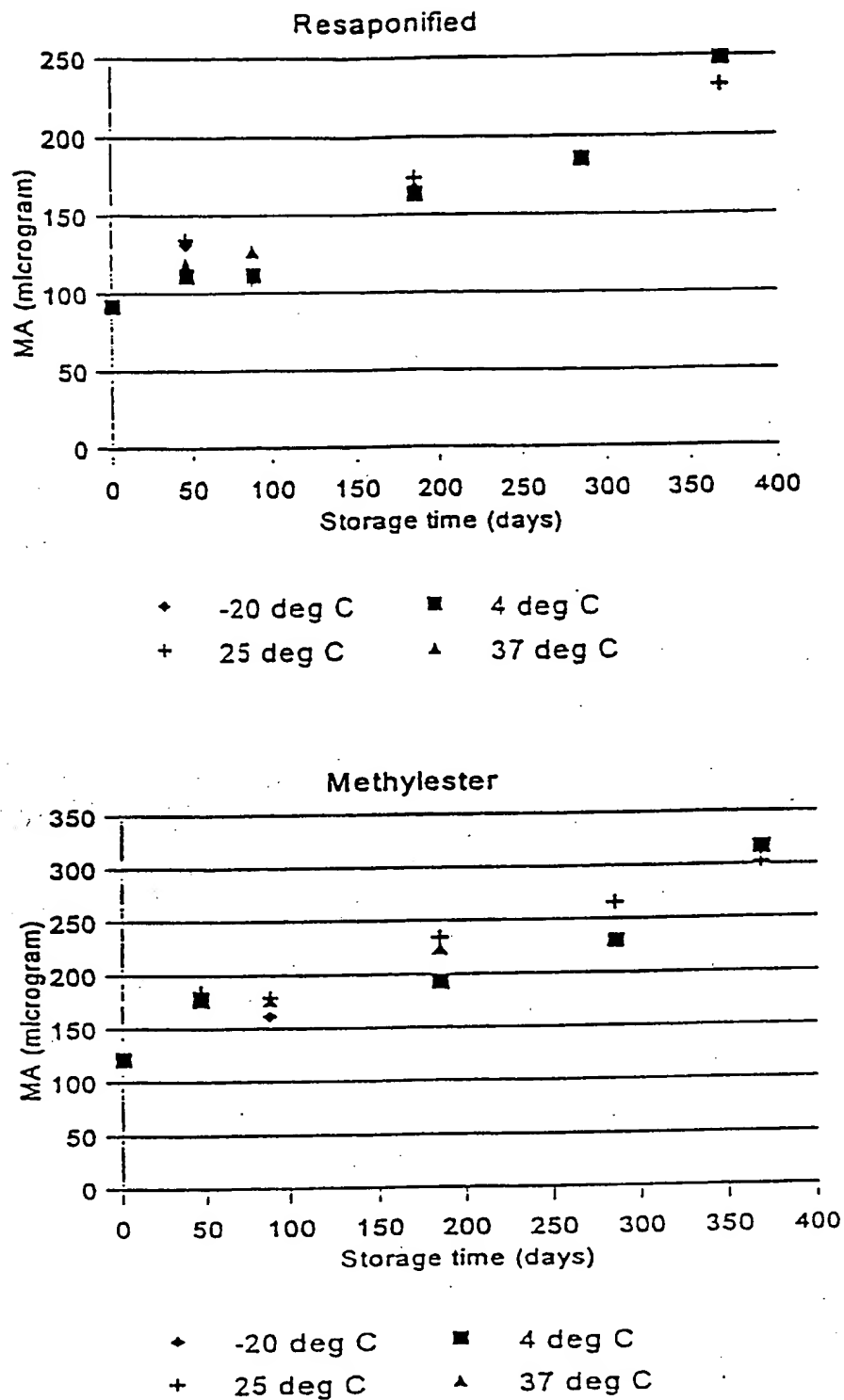


Fig. 7

Stability of mycolic acids originating from *M. tuberculosis* (resaponified and methylester form) upon dry storage



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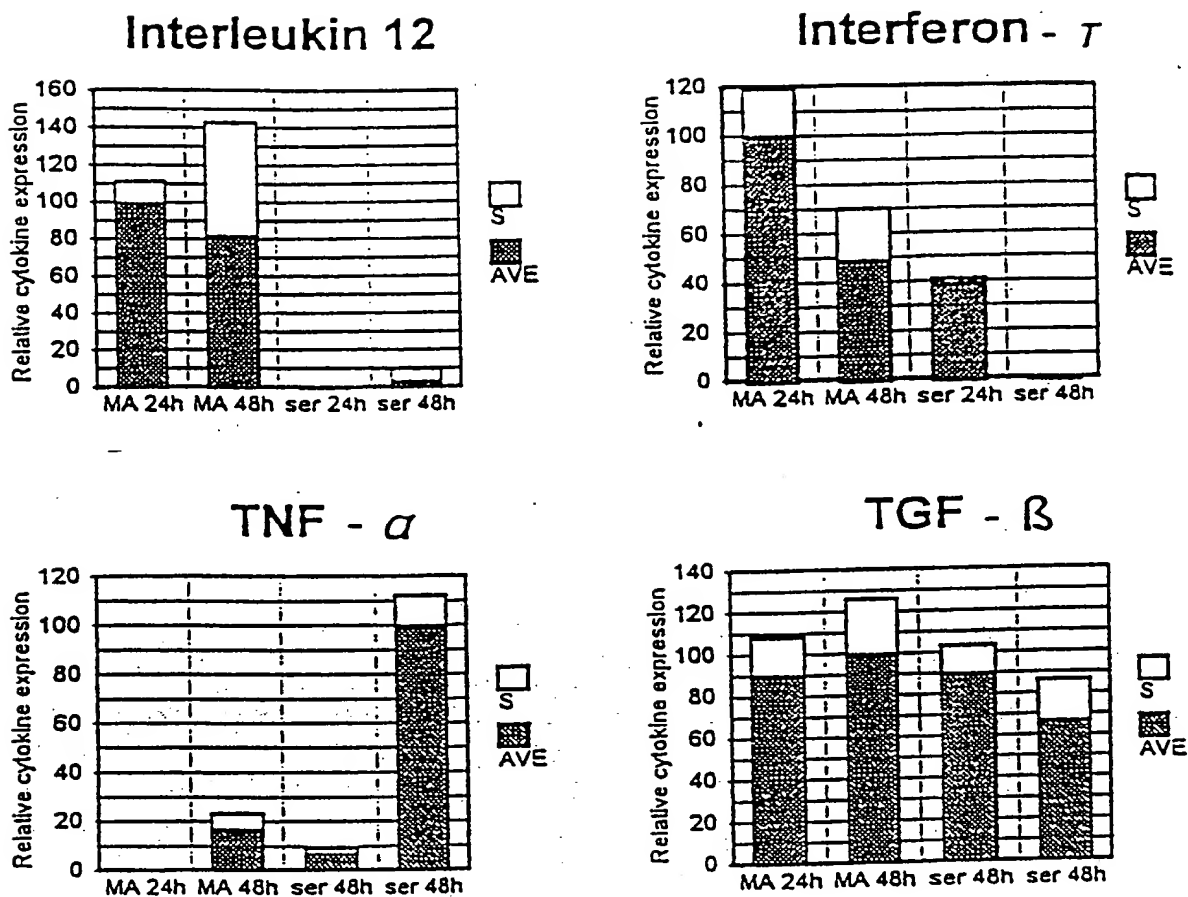


Fig. 8

Cytokine profiles of IL-12, IFN- $\gamma$ , TNF- $\alpha$  and TGF- $\beta$  in the lungs of Balb/c mice treated with 250  $\mu$ g and boosted with 25  $\mu$ g mycolic acids from *M. tuberculosis*. The lungs were removed 24 and 48 hours after the boost

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IL-12 expression in Dalh/6 and C57BL/6 mice infected with T1 as compared to control, non-infected mice.

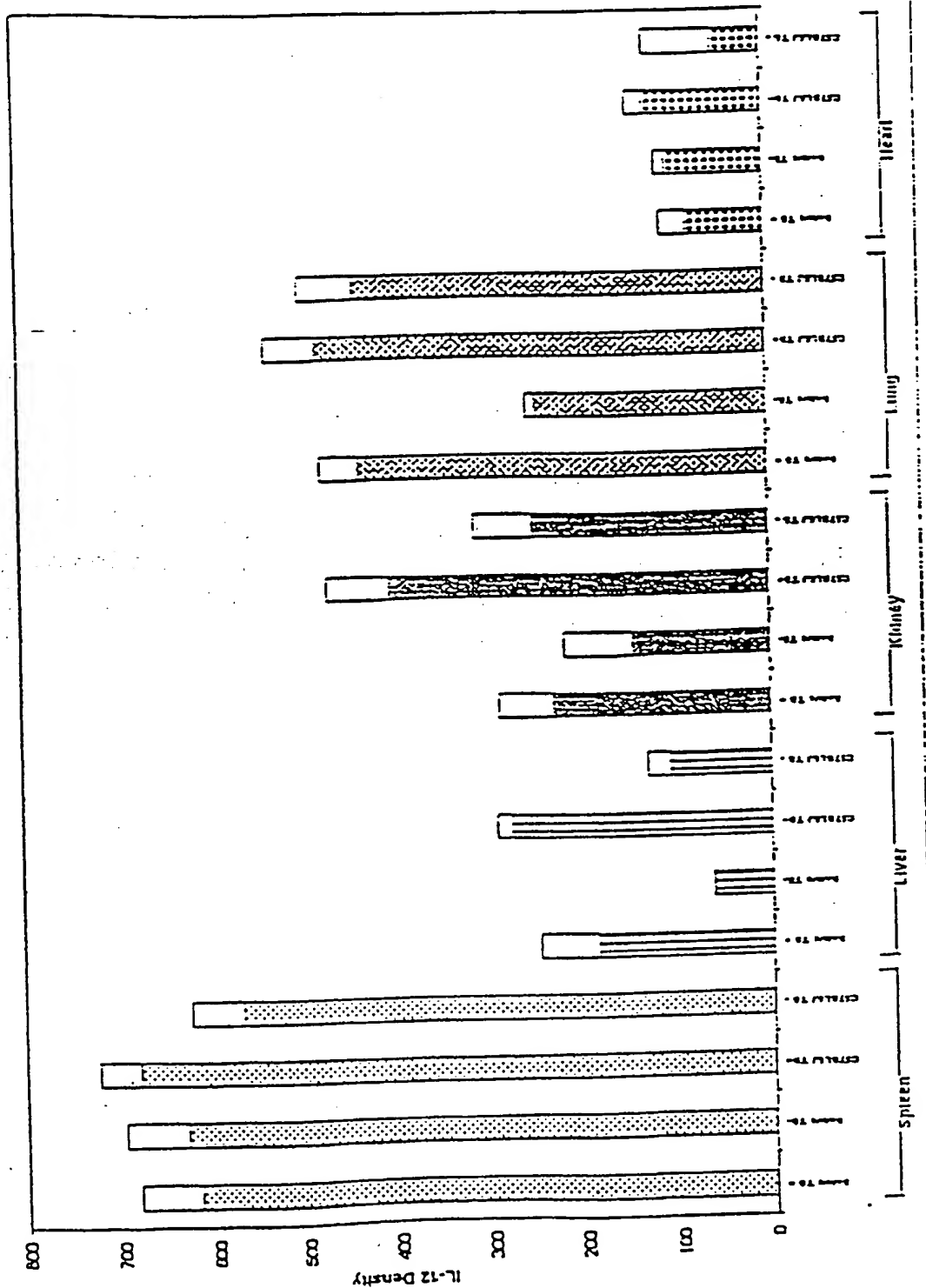


Fig. 9 IL-12 expression in the spleen, liver, kidney, lung and heart of Dalh/6 and C57BL/6 mice two weeks after the infection with *M. tuberculosis*

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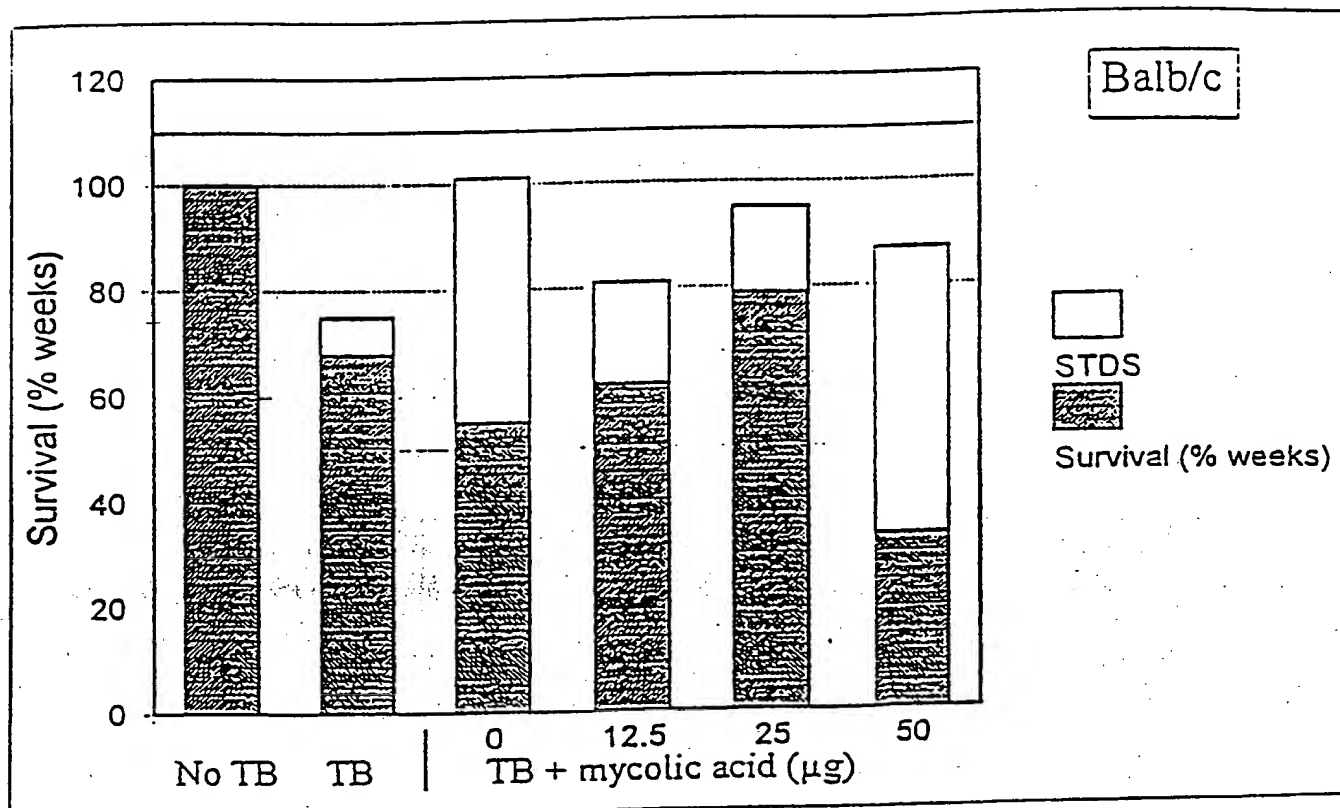


Fig. 10

Survival of *M. tuberculosis*-infected Balb/c mice, pre-treated with mycolic acids (from *M. tuberculosis*) one week before the infection, at the indicated doses

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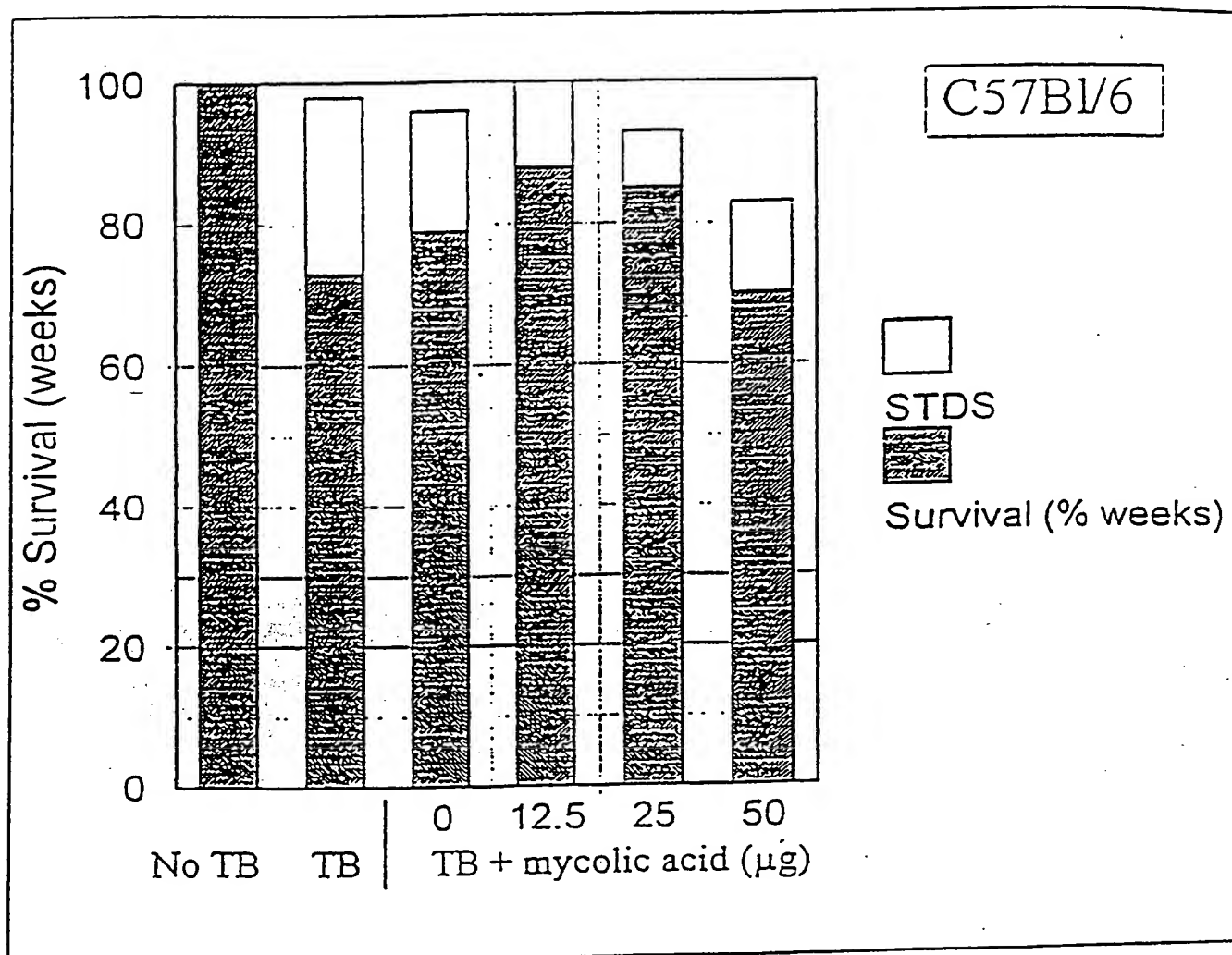


Fig. 11

Survival of *M. tuberculosis*-infected C57Bl/6 mice, pre-treated with mycolic acids (from *M. tuberculosis*) one week before the infection, at the indicated doses

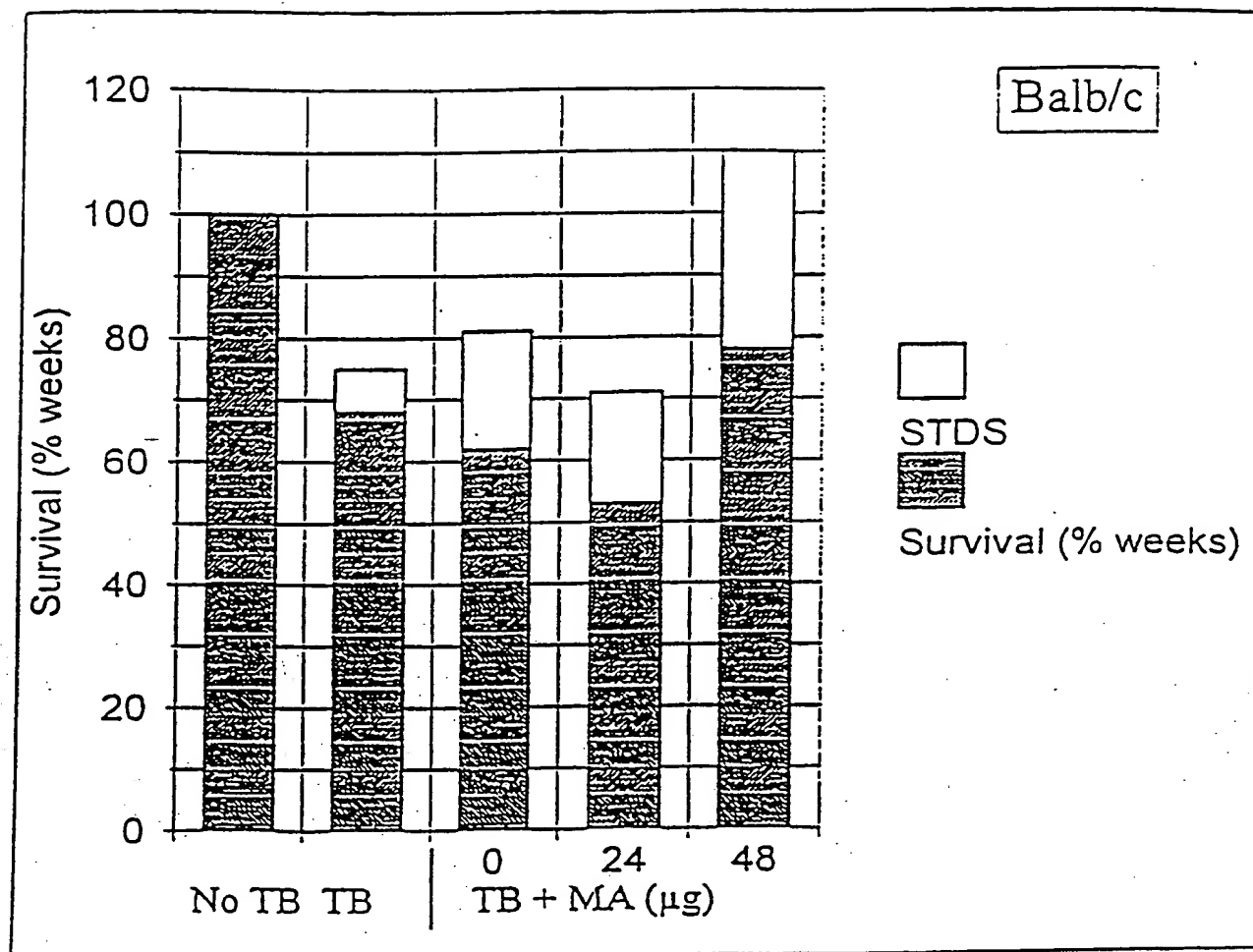


Fig. 12

Survival of *M. tuberculosis*-infected Balb/c mice post-treated with mycolic acids (from *M. tuberculosis*) three weeks after the infection, at the indicated doses, delivered in three daily injections of equal dose

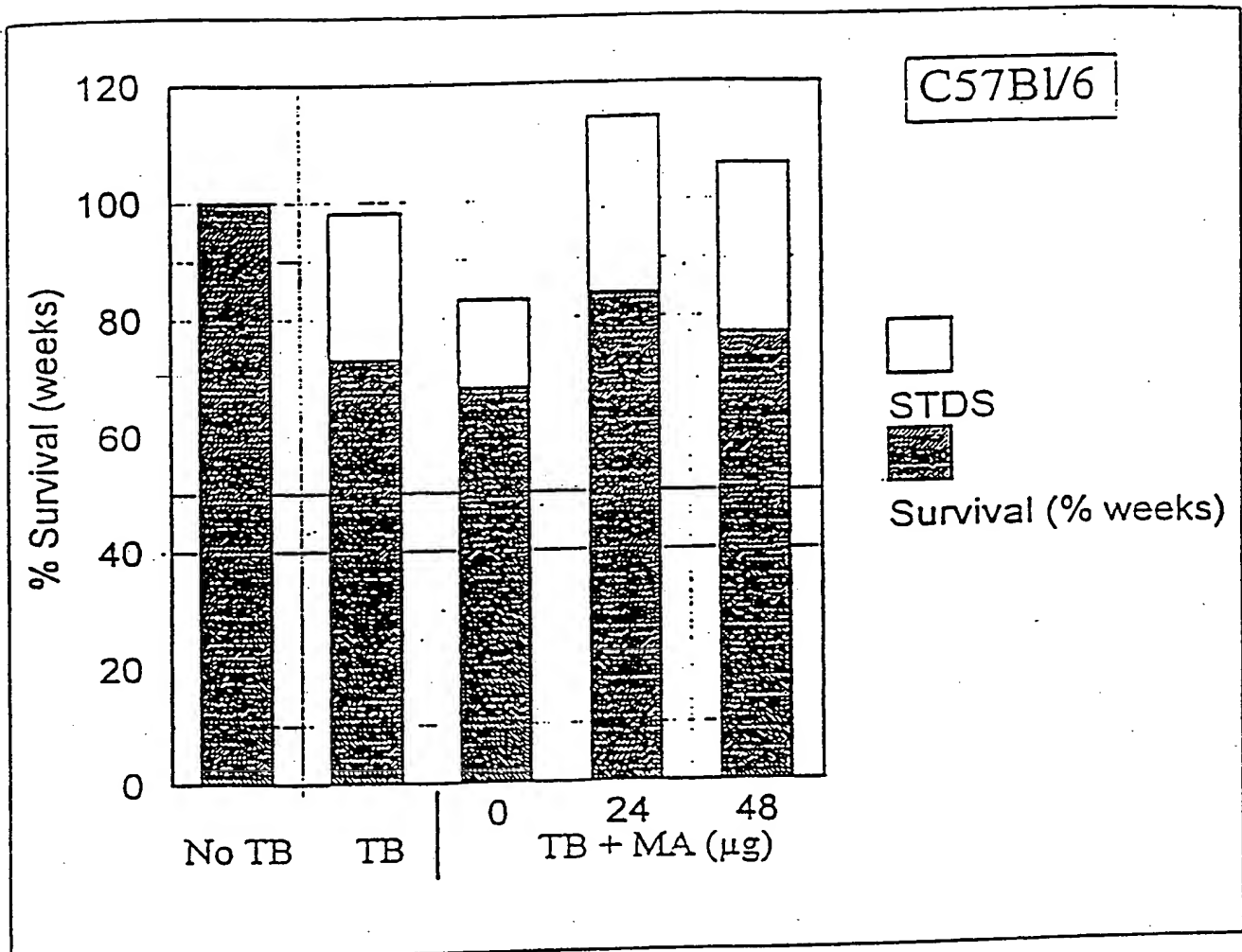


Fig. 13

Survival of *M. tuberculosis*-infected C57Bl/6 mice post-treated with mycolic acids (from *M. tuberculosis*) three weeks after the infection, at the indicated doses, delivered in three daily injections of equal dose

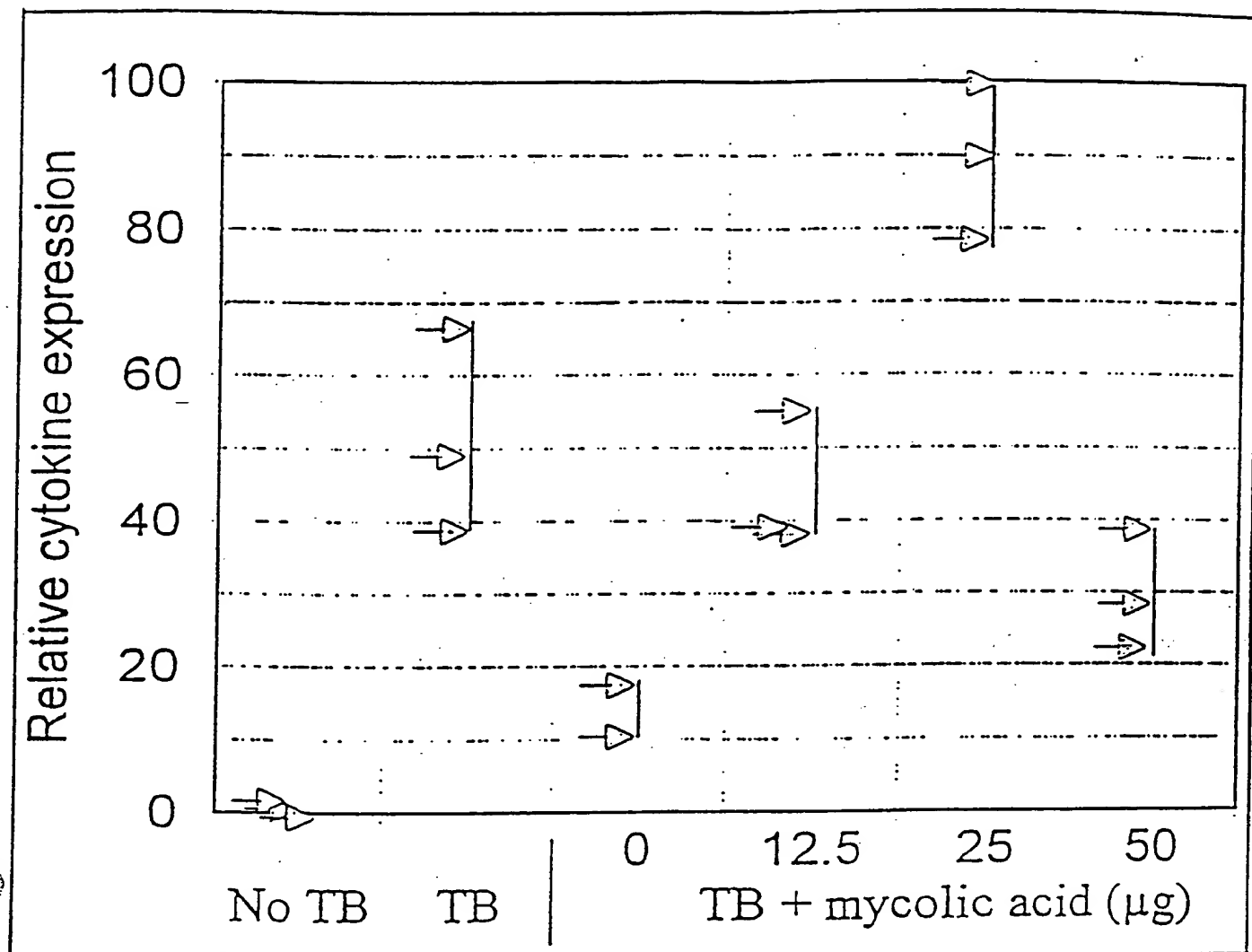


Fig. 14

Expression of IL-12 in *M. tuberculosis*-infected Balb/c mice, pretreated with mycolic acids (from *M. tuberculosis*) one week before the infection, at the indicated doses. Lungs were removed five weeks after the infection.

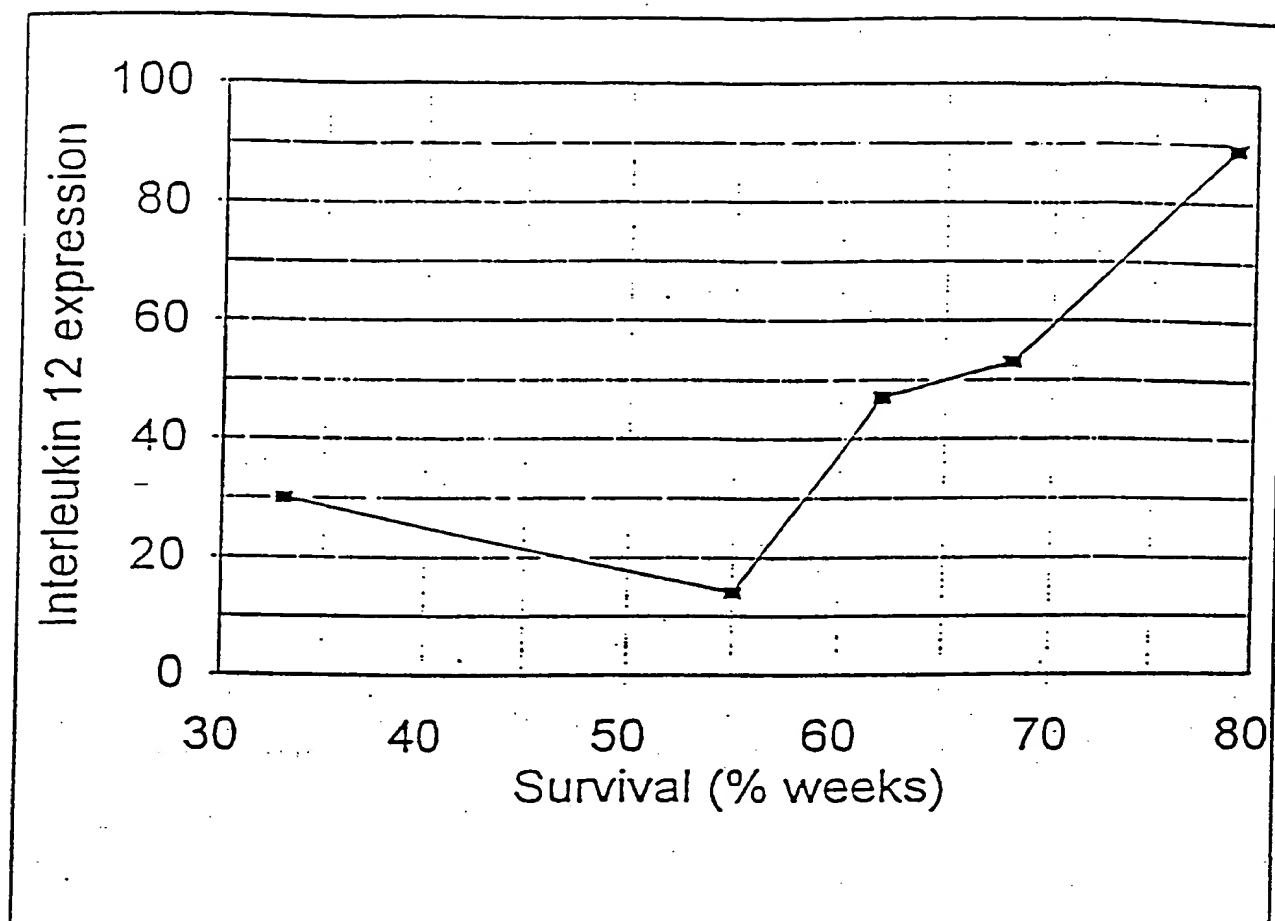


Fig. 15 Correlation between IL-12 expression in the lungs of Balb/c mice, pre-treated with mycolic acids (from *M. tuberculosis*), at five weeks after the infection and their survival



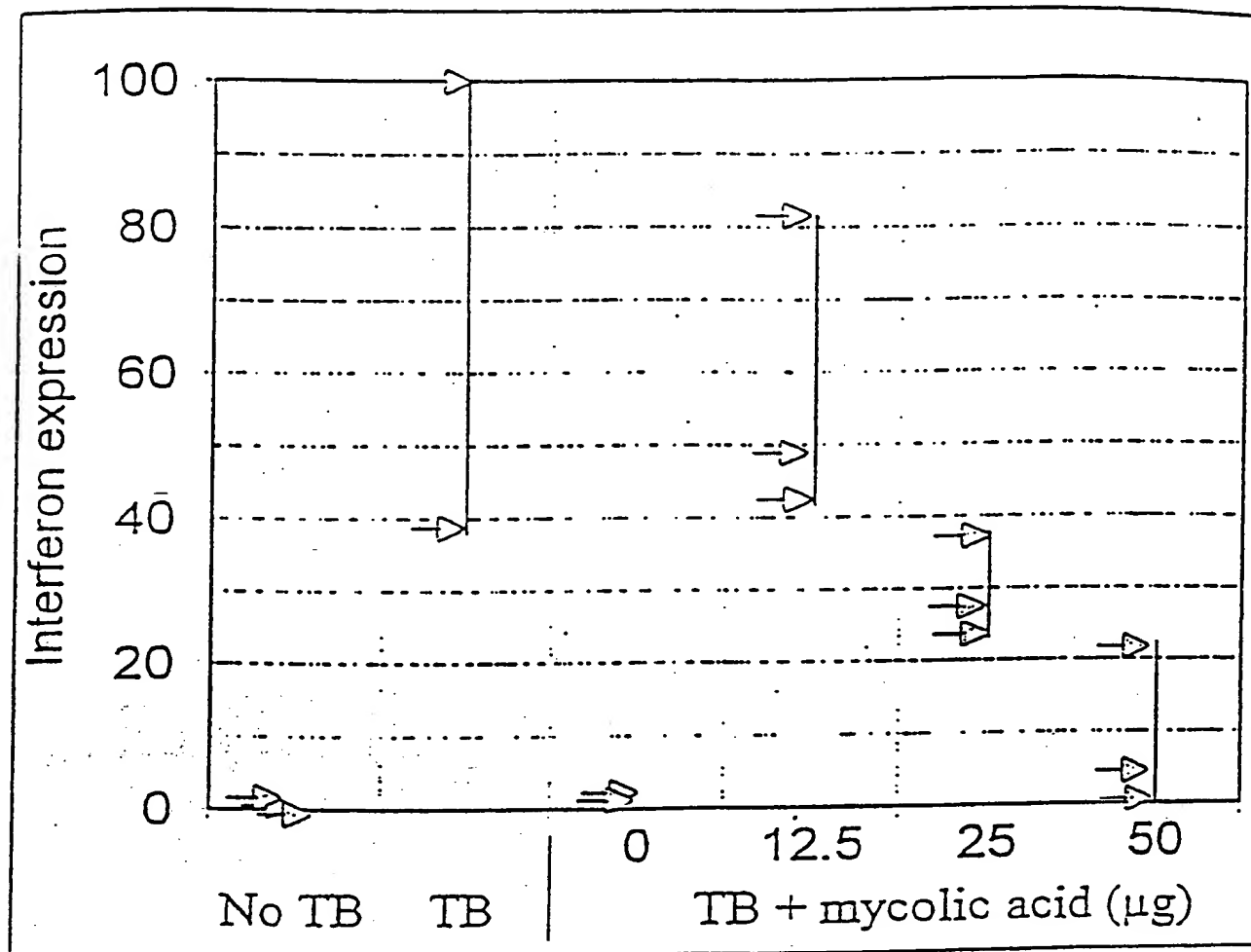


Fig. 16

Expression of IFN- $\gamma$  in *M. tuberculosis*-infected Balb/c mice pre-treated with mycolic acids (from *M. tuberculosis*) one week before the infection, at the indicated doses. Lungs were removed five weeks after the infection.

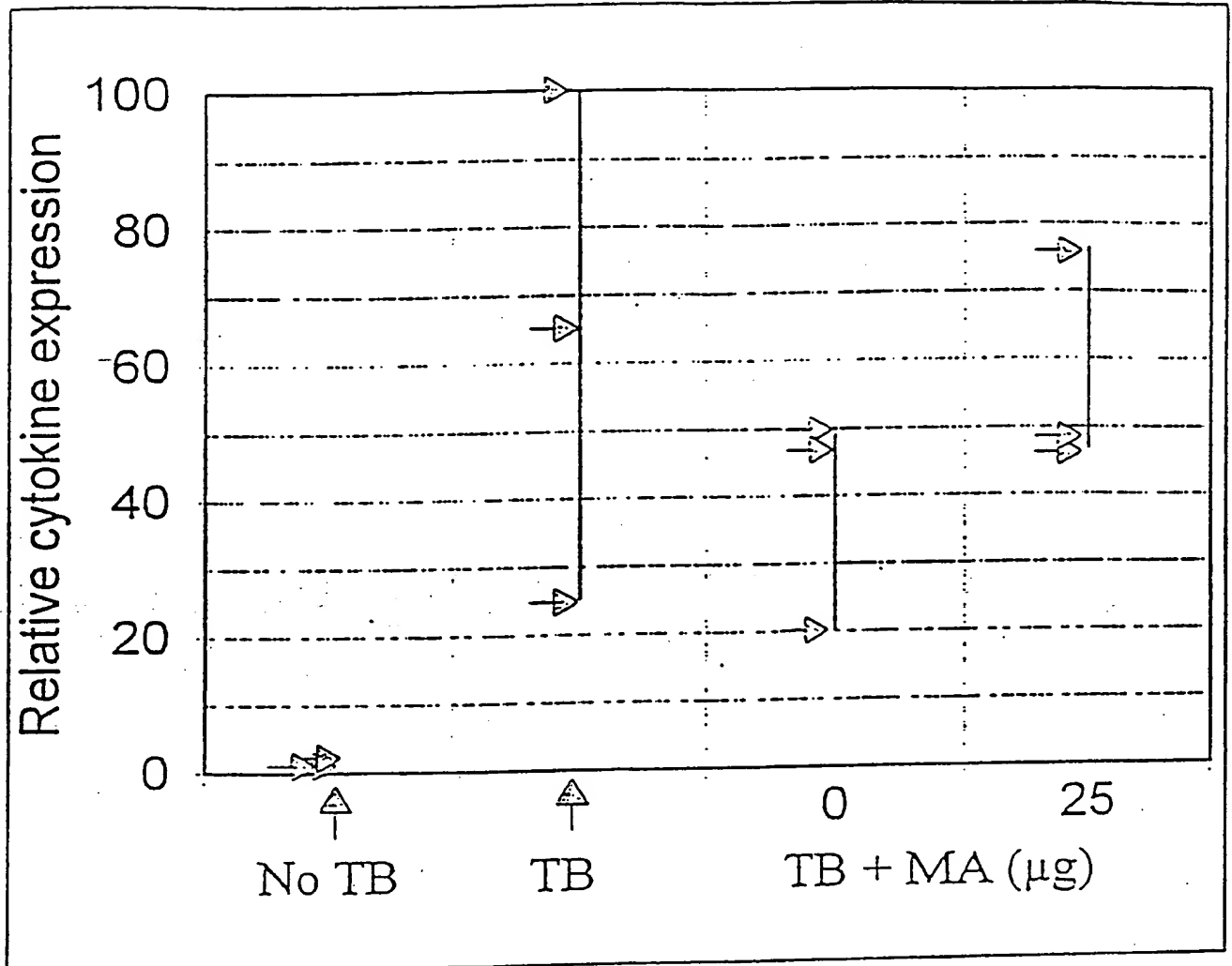


Fig. 17

Repeat experiment. Expression of IFN- $\gamma$  in *M. tuberculosis*-infected Balb/c mice pre-treated with mycolic acids (from *M. tuberculosis*) one week before the infection, at the indicated doses. Lungs were removed five weeks after the infection.

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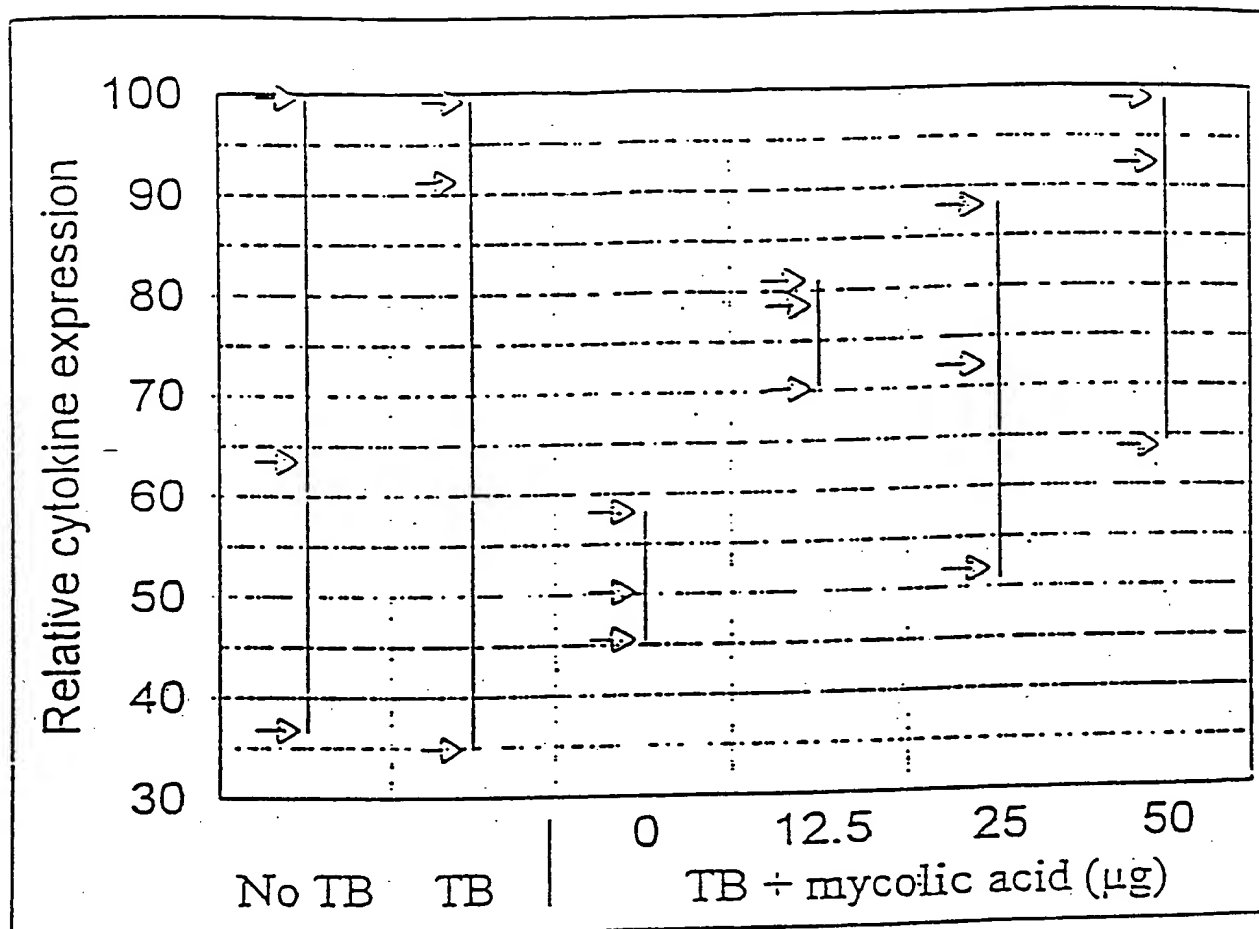


Fig. 18

Expression of TGF- $\beta$  in *M. tuberculosis*-infected Balb/c mice pre-treated with mycolic acids (from *M. tuberculosis*) one week before the infection, at the indicated doses. Lungs were removed five weeks after the infection.

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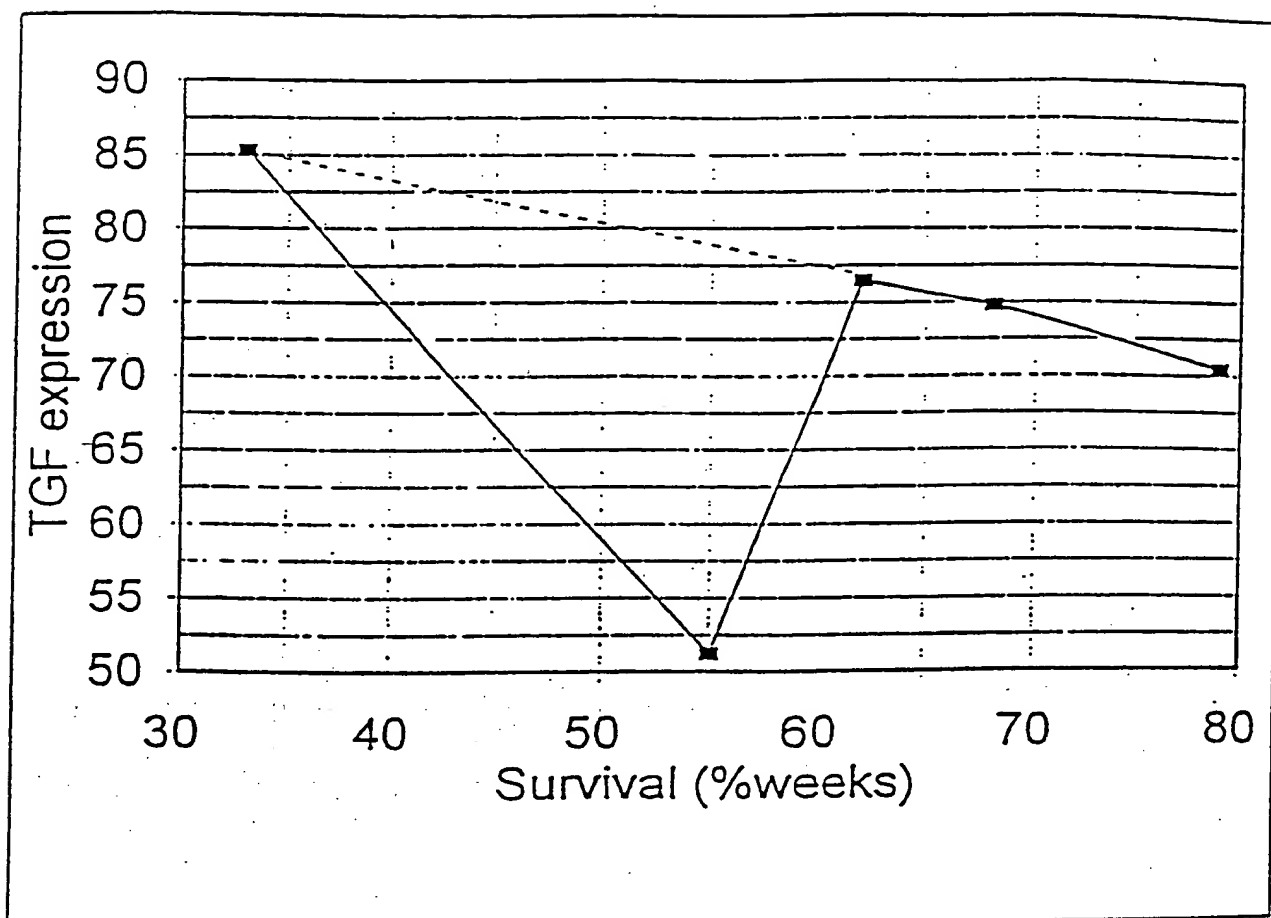


Fig. 19

Correlation between TGF- $\beta$  expression in the lungs of Balb/c mice, pre-treated with mycolic acids (from *M. tuberculosis*) and their survival. The lungs were removed five weeks after the infection

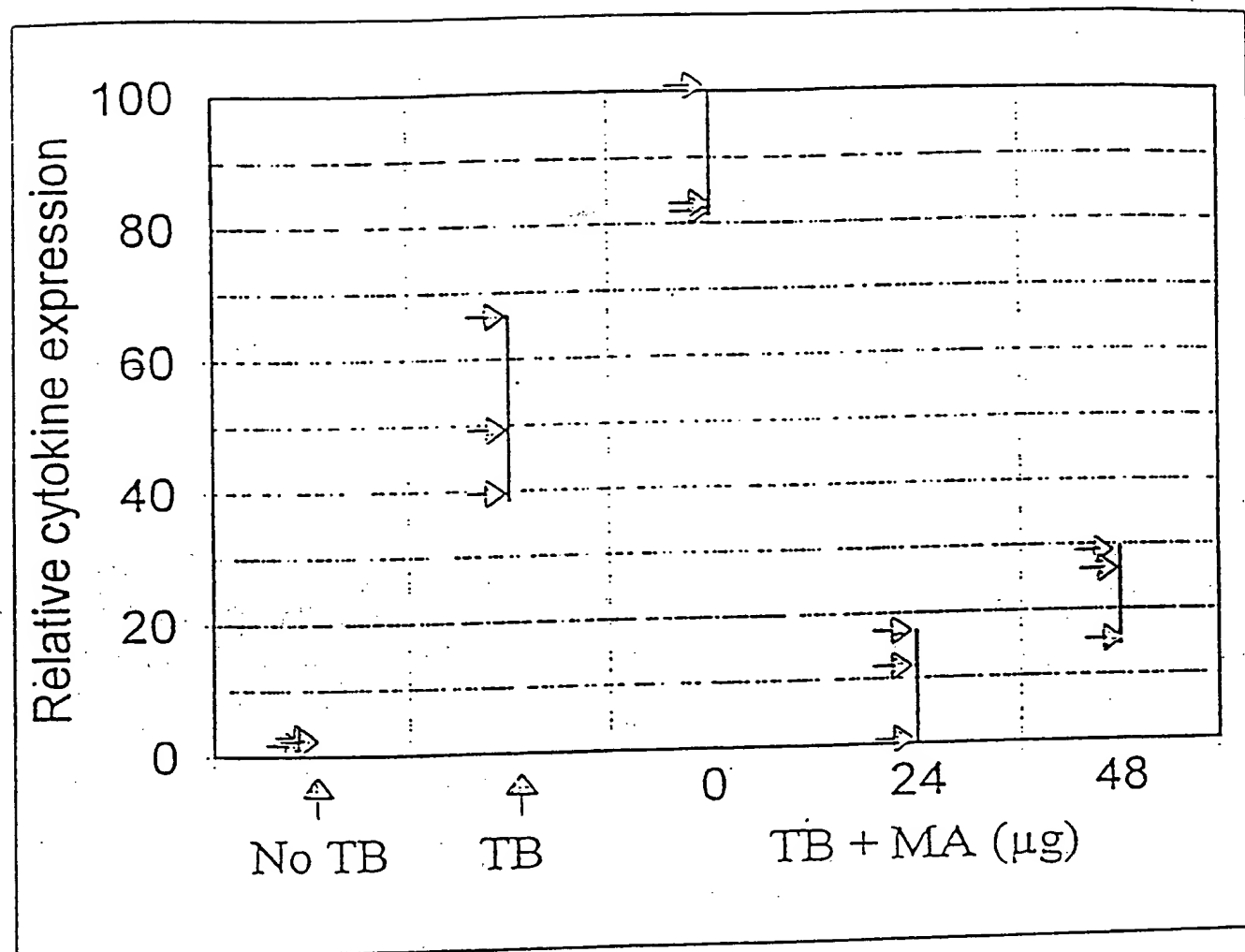


Fig. 20

Expression of IL-12 in *M. tuberculosis*-infected Balb/c mice, post-treated with mycolic acids (from *M. tuberculosis*) three weeks after the infection, at the indicated doses. Lungs were removed five weeks after the infection.

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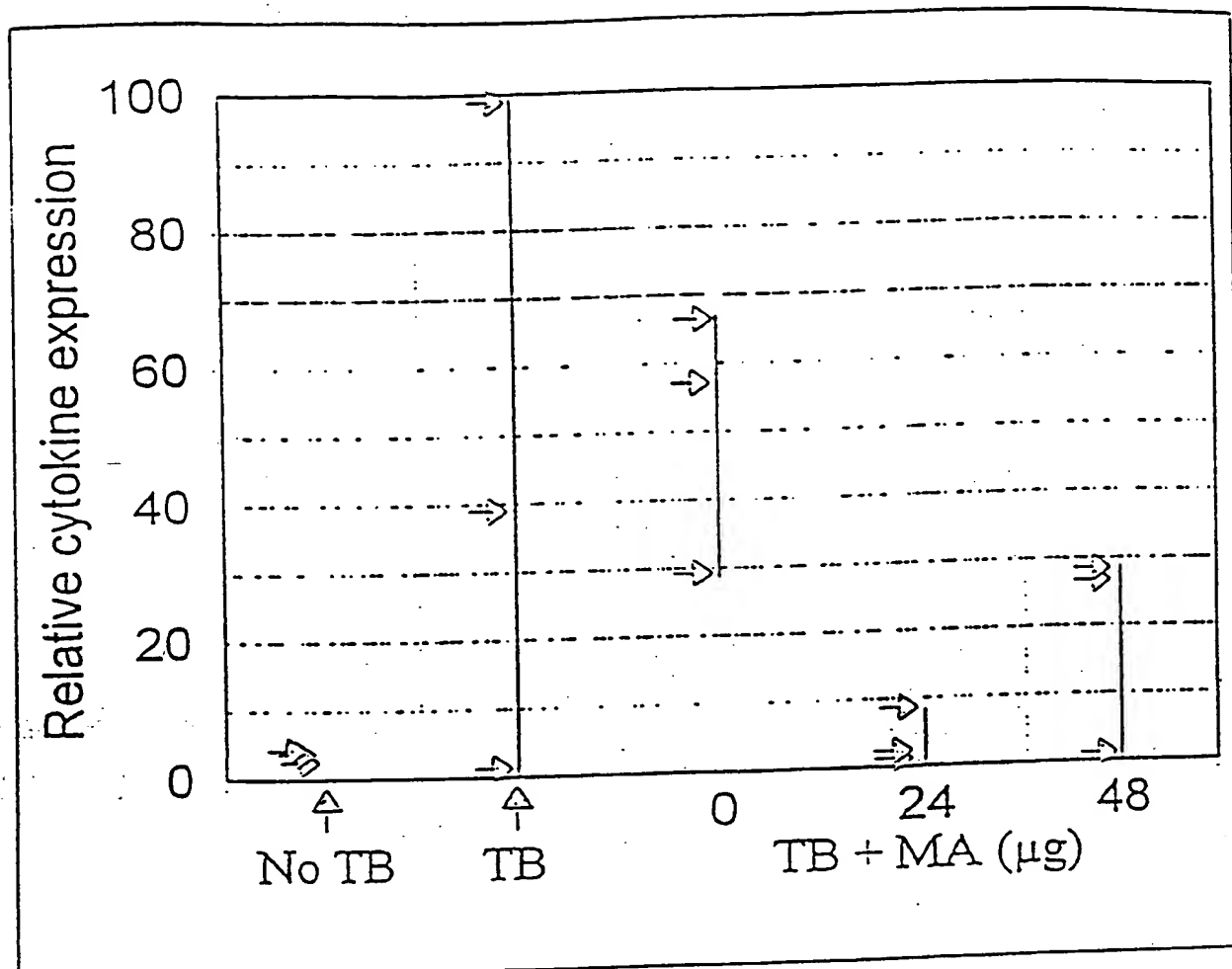


Fig. 21

Expression of IFN- $\gamma$  in *M. tuberculosis*-infected Balb/c mice post-treated with mycolic acids (from *M. tuberculosis*) three weeks after the infection, at the indicated doses. Lungs were removed five weeks after the infection.

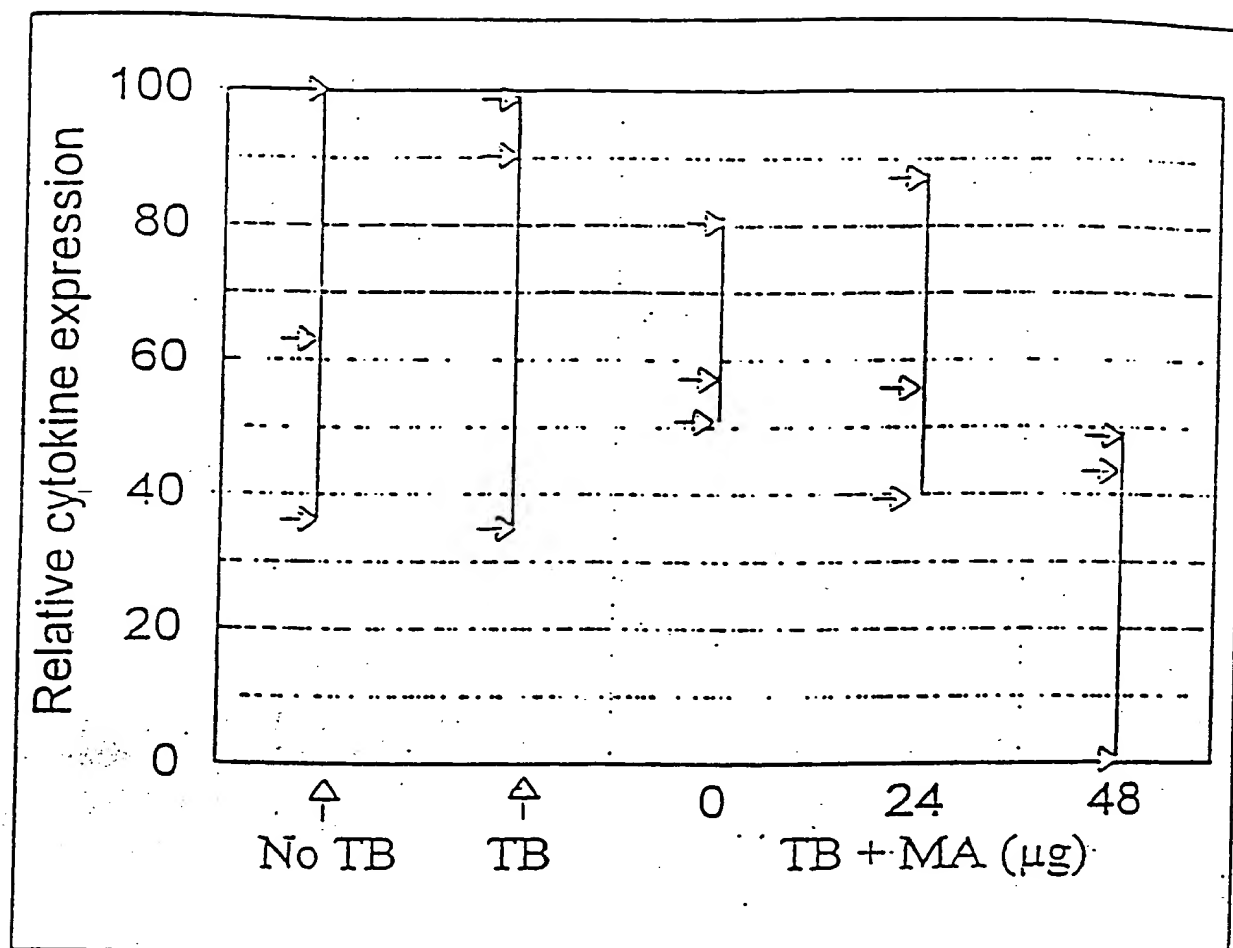


Fig. 22. Expression of TGF- $\beta$  in *M. tuberculosis*-infected Balb/c mice post-treated with mycolic acids (from *M. tuberculosis*) three weeks after the infection, at the indicated doses. Lungs were removed five weeks after the infection.

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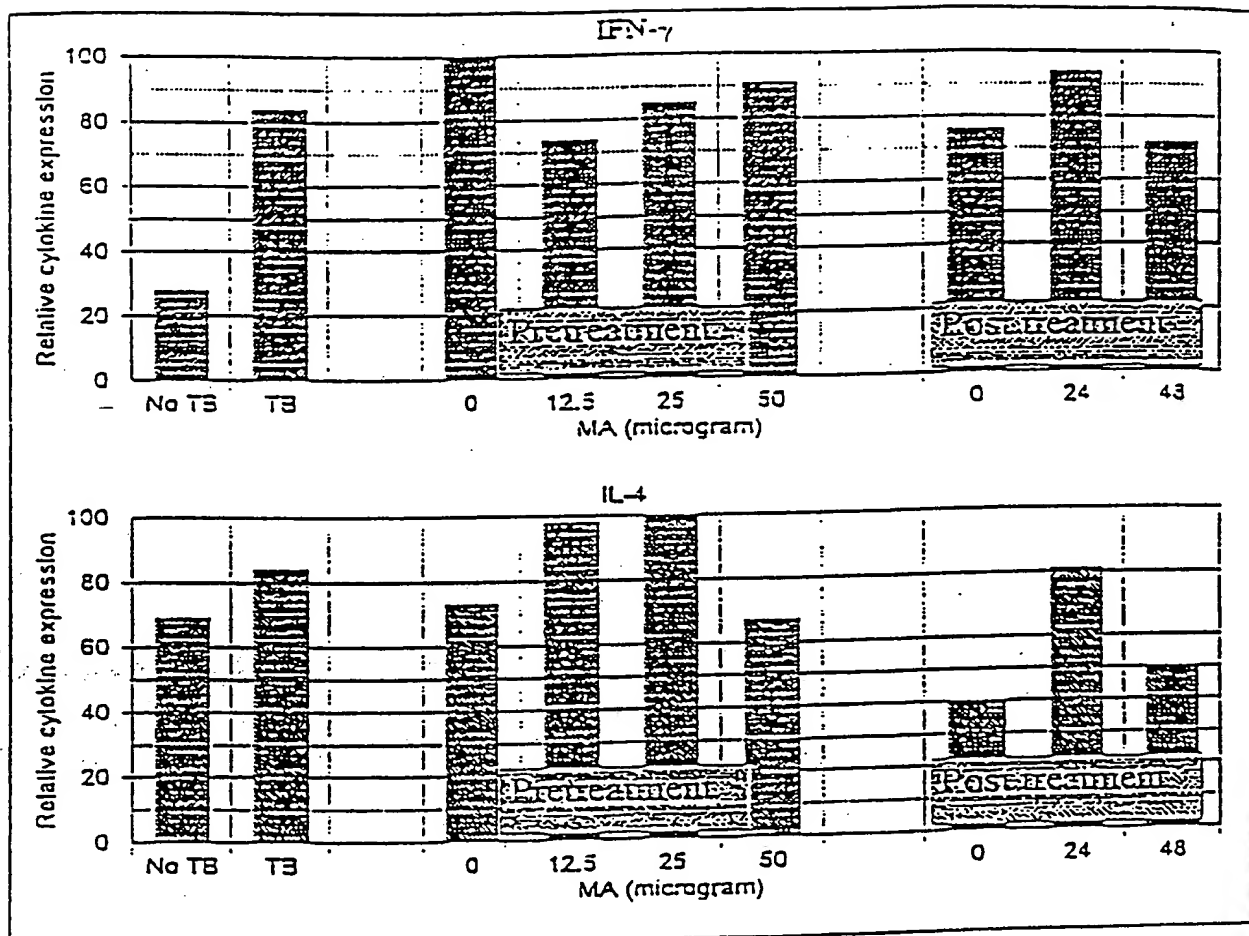


Fig. 23

Cytokine profiles of IFN- $\gamma$  and IL-4 in the spleen of Balb/c mice pre- and post-treated with mycolic acids (from *M. tuberculosis*) at the indicated doses.



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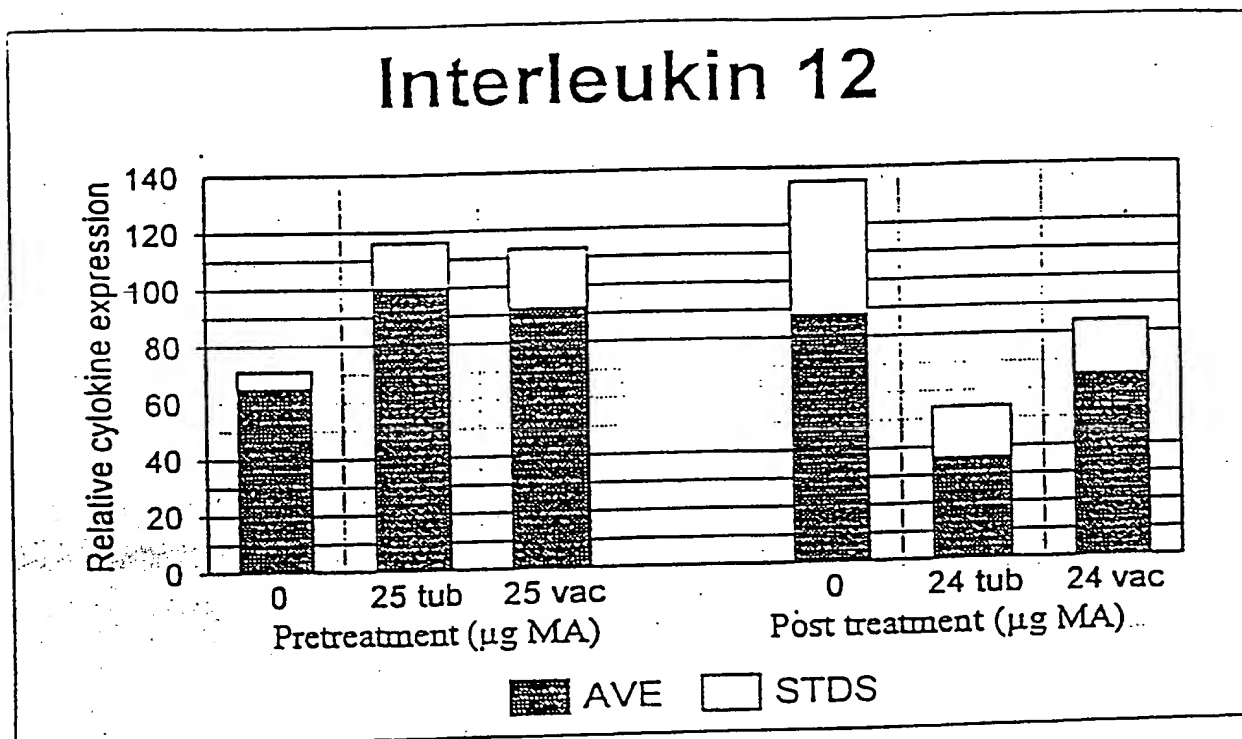


Fig. 24

Expression of IL-12 in the lungs of *M. tuberculosis*-infected Balb/c mice, pre- and post-treated with mycolic acids (from *M. vaccae*) at the indicated doses. Lungs were removed five weeks after the infection.

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Fig. 25a

A photograph of two rats, the rat on the left being a control and having received only FIA, the rat on the right having received a reagent for the induction of adjuvant arthritis and showing a bleeding nose and arthritic nodules visible on the front paws.

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**Figure 25b** A photograph of two rats, the rat on the right having been pre-treated with 1 mg of mycolic acids serum in FIA before having received a reagent for the induction of adjuvant arthritis and showing minimal signs of arthritis, the rat on the left not having been pre-treated before having received a reagent for the induction of adjuvant arthritis and showing swollen and inflamed arthritic hind legs

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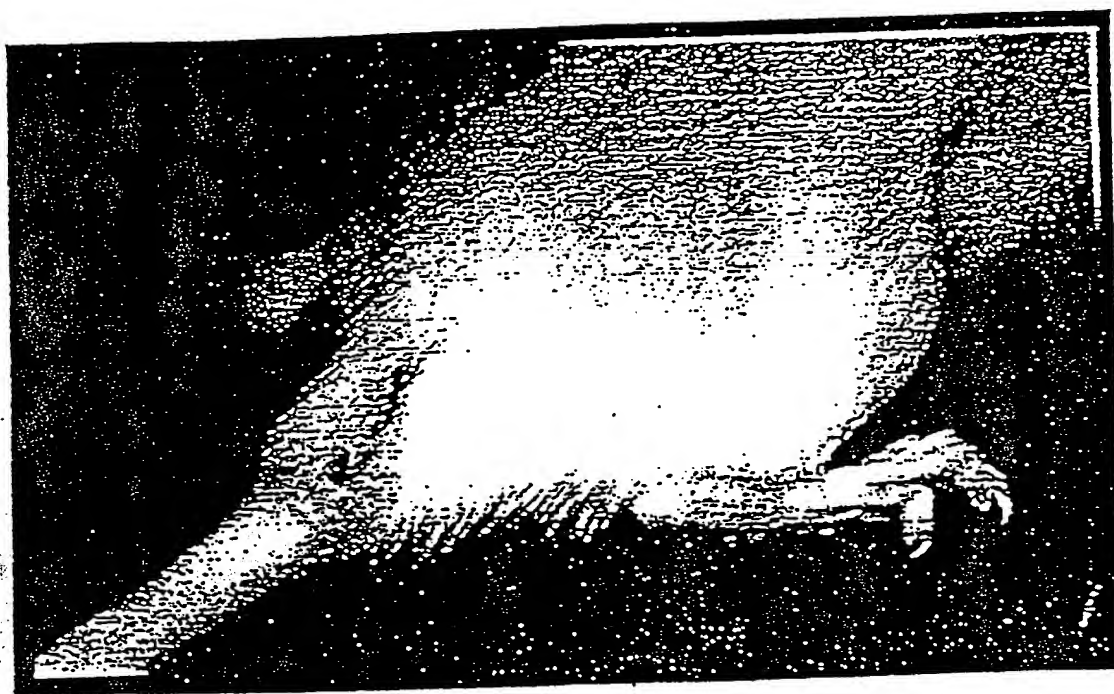
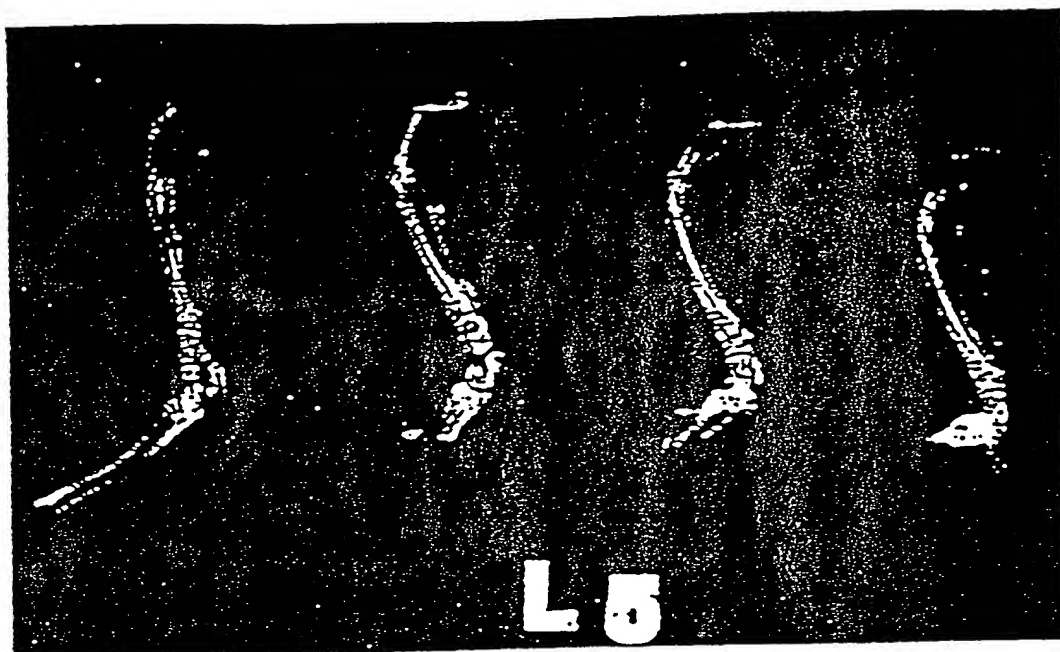


Fig. 25c

A photograph of the rat showing the typical deformation of the joints in the hind legs, the so-called "swimming position" and a necrosis developing at the site of the injection.

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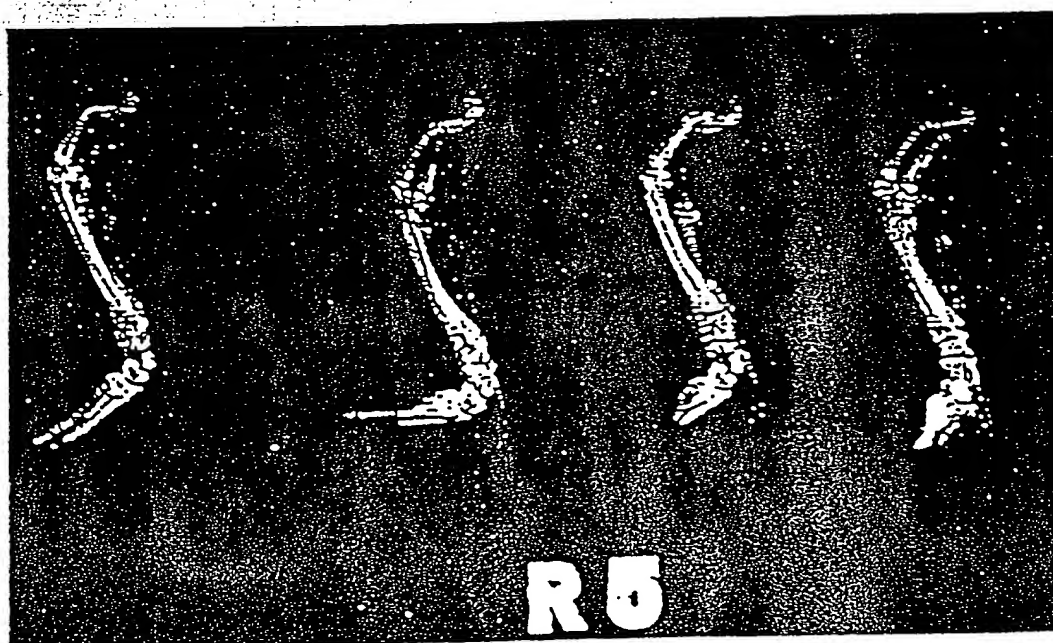


Fig. 26a

X-ray photographs of the hind limbs of rats used in the arthritis experiments. Group 5 of Tables 8a and 8b - a "negative" control treated with Freund's Adjuvant only.

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Fig. 26b

X-ray photographs of the hind limbs of rats used in the arthritis experiments. Group 1 of Tables 8a and 8b- a "positive" control treated with *M. tuberculosis* H37Rv suspended in Freund's Adjuvant.



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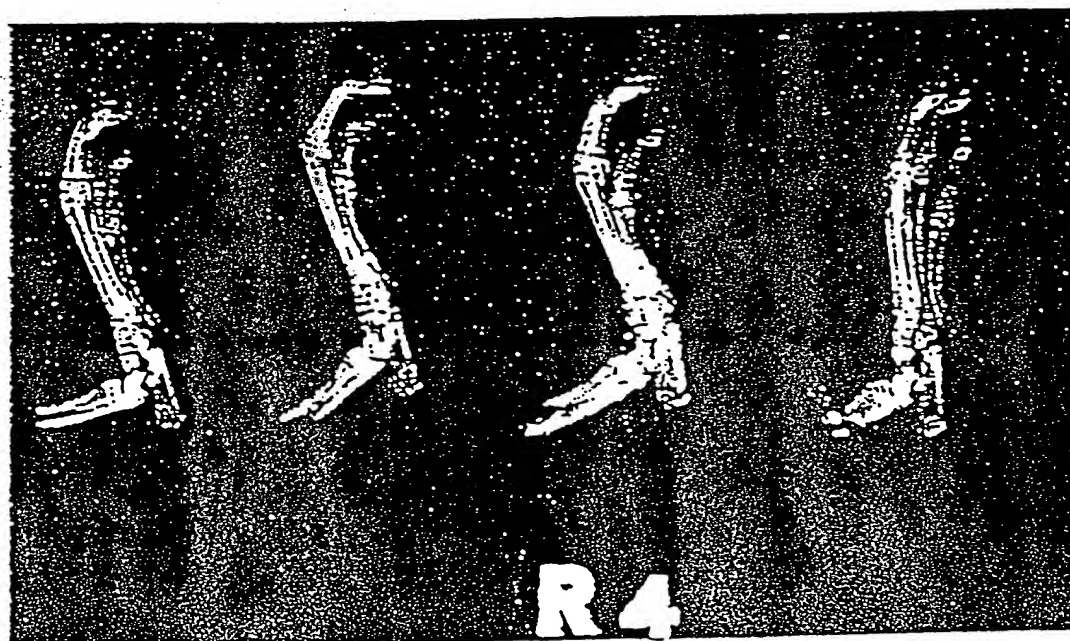


Fig. 26c

X-ray photographs of the hind limbs of the rats pre-treated with 1 mg mycolic acids (from *M. tuberculosis*) prior to the induction of arthritis. Group 4 of Tables 5a and 5b.

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Figure 27 A photograph showing the emaciation of a rat with typical induced adjuvant arthritis



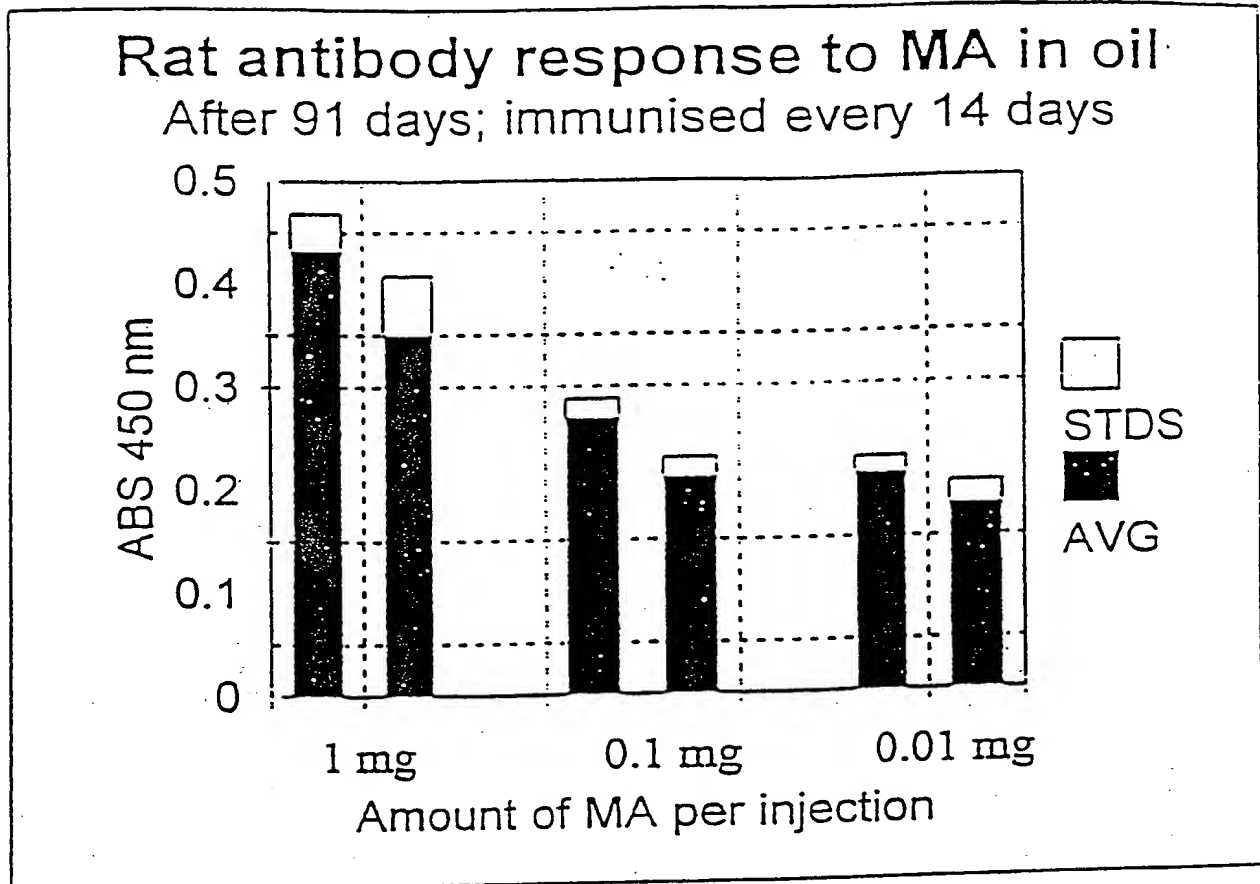


Fig. 28

Rat antibody response to mycolic acids suspended in oil, using 1.0, 0.3 and 0.1 mg/mycolic acids per immunization, after three months treatment

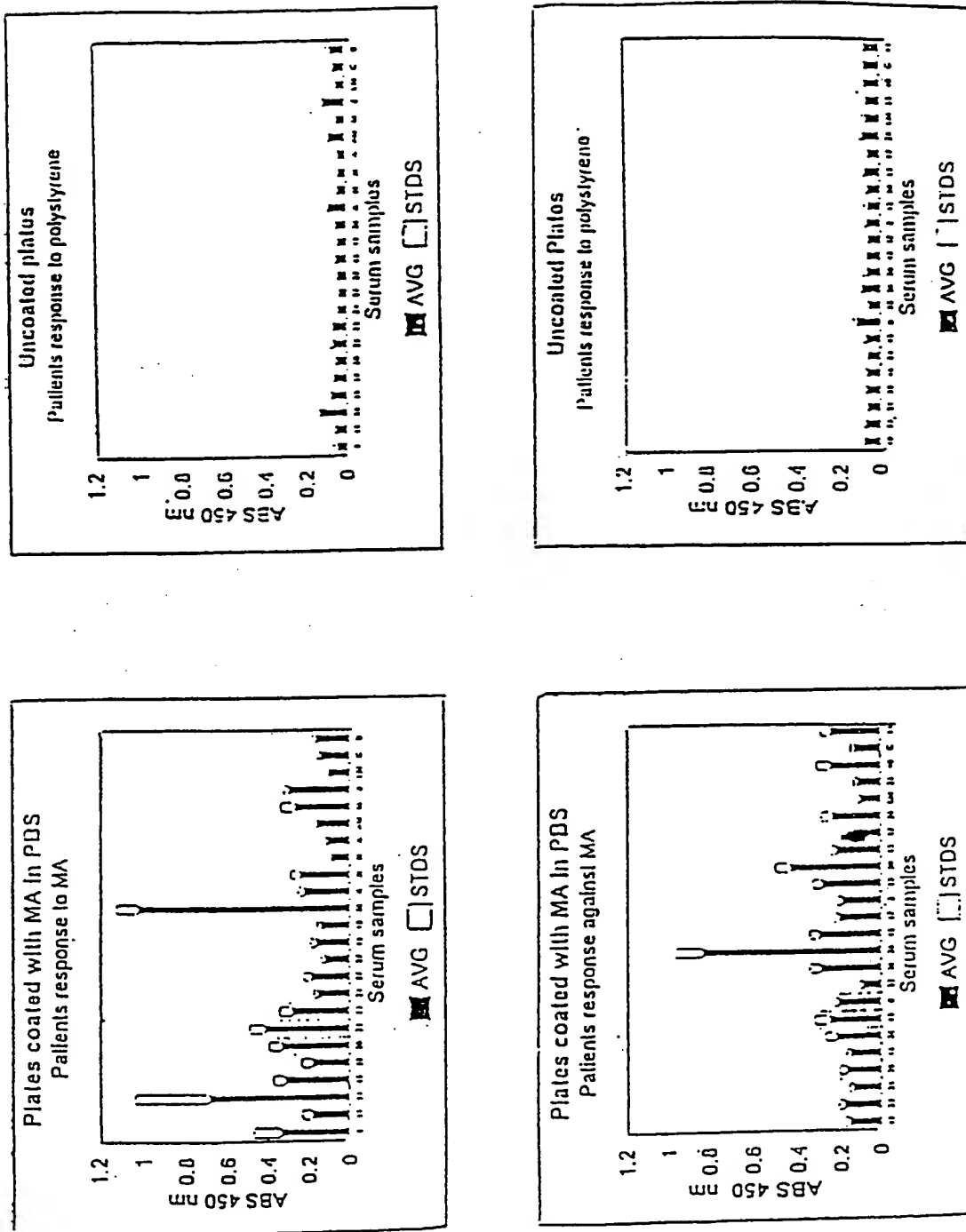


Fig. 29 ELISA results of human tuberculosis patients' sera (numbered) in comparison to healthy controls (latters) on the plates coated with mycolic acids

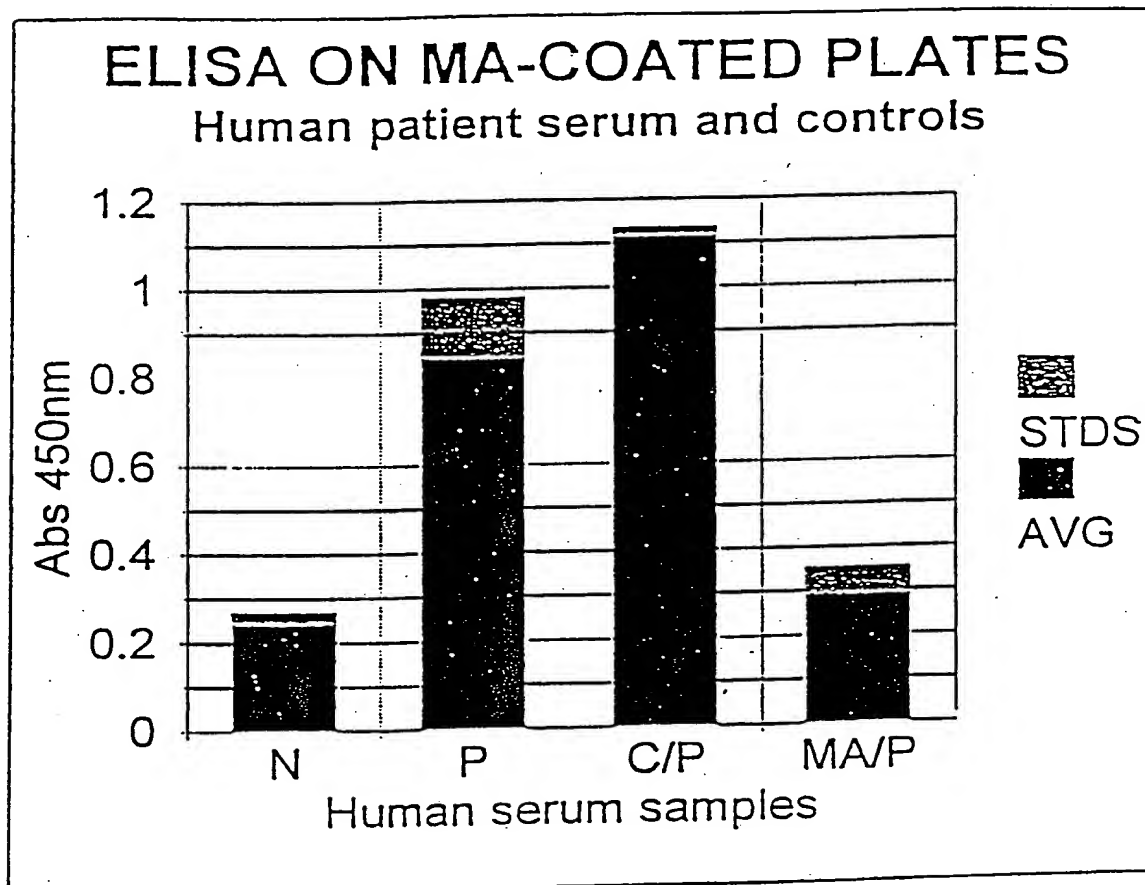


Fig. 30

Specificity assay of antibodies of human tuberculosis patients No 38  
assessed by inhibition ELISA

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Antibodies against mycolic acids are useful  
in the diagnosis of tuberculosis

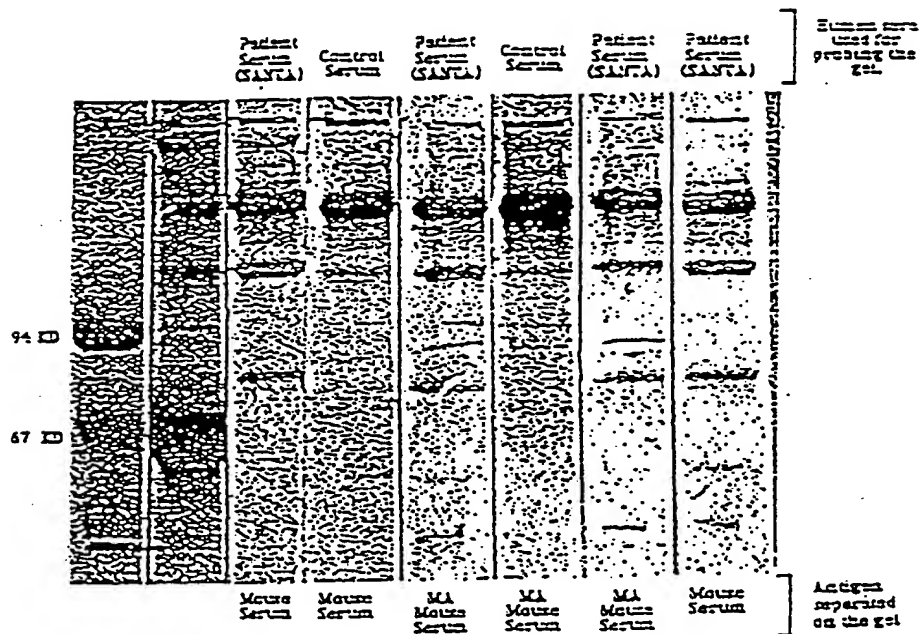


Fig. 31

Western blot of mouse serum with and without exposure to mycolic acids probed with human tuberculosis patient's and a healthy control sera

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## Stimulation of T-cells on CD1 APC

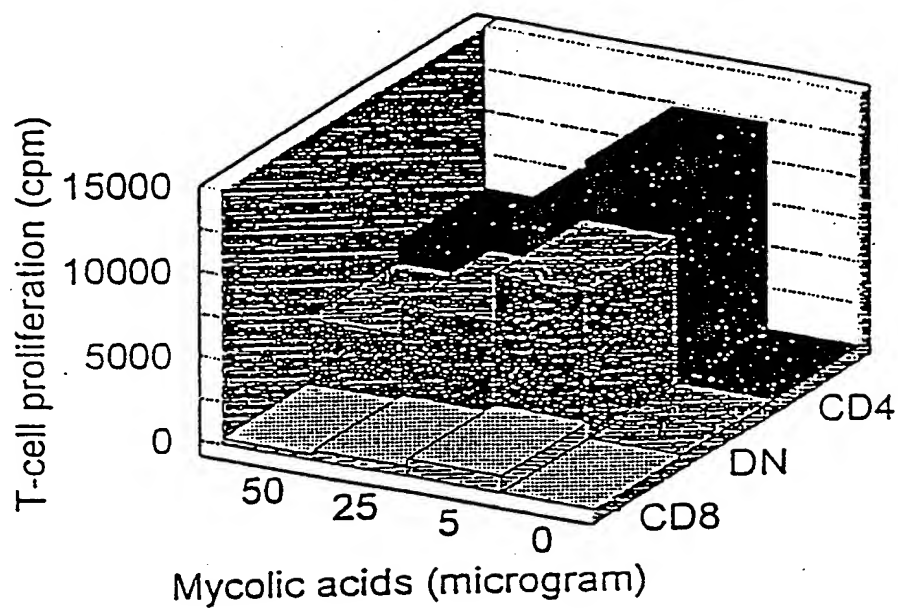


Fig. 32a

Stimulation by mycolic acids of human T cells by CD1 presenting cells

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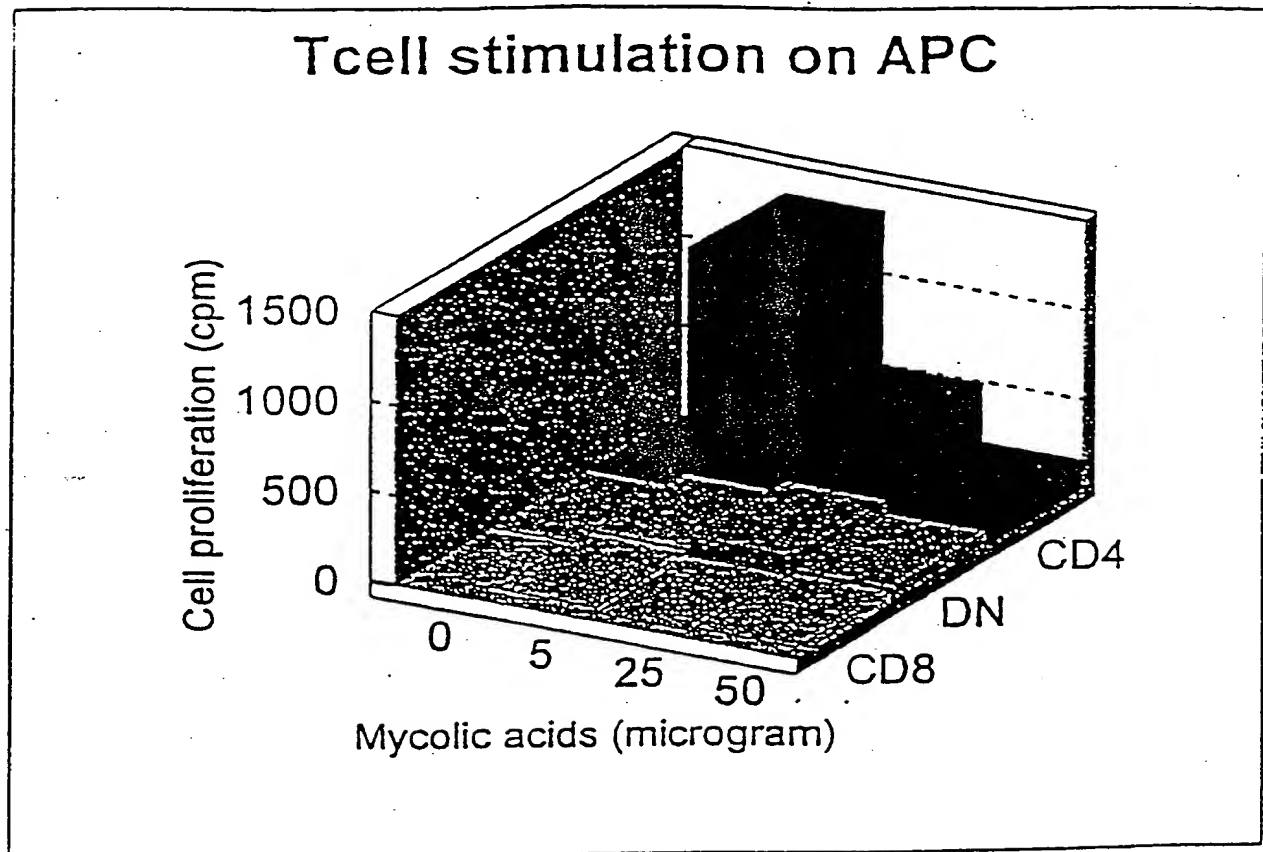


Fig. 32b

Stimulation of human T cells by mycolic acids in the presence of antigen presenting cells (APC)